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VACCINATION OF SCHOOL CHILDREN.

COURT DECIDES THAT A LOCAL BOARD OF HEALTH MAY REQUIRE ALL CHILDREN ATTENDING CERTAIN SCHOOLS TO BE VACCINATED.

The Board of Health of Jefferson County, Ky., issued an order requiring that all children attending schools in School District No. 46, Highland Park, Ky., must be vaccinated, excepting such children as had been successfully vaccinated within seven years.

The board of trustees of the school district resisted the enforcement of the order, but the Court of Appeals of Kentucky decided that the board was authorized by the Kentucky laws to take the action, and that the order must be complied with.

The opinion is published in this issue of the Public Health Reports, pages 2173.

THE SANITATION OF RAILWAY CARS.¹

By THOMAS R. CROWDER, M. D., Chicago.

The object of the sanitation of railway cars is to protect the health of passengers and crews. In order to do this effectively we must first know what the dangers are and how they act.

The dangers of railway travel may be separated into, first, the danger arising from mechanical accidents; second, the danger of contracting infectious diseases; and, third, the danger incident to a group of miscellaneous influences, such as prolonged confinement, uncomfortable seats, the rapid and variable motion of the train, faulty ventilation, heating, and lighting, and the breathing of dust, smoke, and engine gases.

A discussion of mechanical accidents lies rather beyond our present purpose. It is the business of engineers and car builders to guard against them. But the sanitarian may be privileged to insist that cars should be strongly built, able to withstand the enormous shocks to which they are normally subjected, be free from sharp angles and

¹ Read at meeting of the New York Railroad Club, Apr. 21, 1916.

corners to catch the unwary as he moves through a swaying train, and so mounted as to keep the rails surely and with comfort to the passenger; with which brief declaration we may turn over the subject to its proper guardians. The other two divisions lie strictly within the sanitary field.

It is only during the last 10 or 15 years that serious attention has been directed to railway sanitary problems. Although there is now a fairly voluminous literature on the subject, it contains little of the exact scientific observation on which efficient practice must be based. There has been a very general tendency to consider the railway car as a thing possessing some peculiar relation to disease in general and to infectious diseases in particular. This is an error. The car is only a special kind of house—it is a house on wheels—a temporary, mobile dwelling place. Its present form is the result of much evolution, only a small part of which has been dictated by hygienic considerations; but in its principal character it remains always a temporary habitation, not differing in other essentials than its mobility from other places where people live together in close proximity. The same sanitary principles apply to it, and the same sanitary practices are necessary for the car as for any other house, with the almost single exception that sewage can not be similarly disposed of. Failure to recognize this essential similarity has led to many unnecessary laws and regulations, some of which have no relation whatever to the public health, and in which the major and minor issues have often been so confused as to act as a real obstruction to sanitary progress.

It is the great aim of sanitation to prevent the spread of infectious diseases, to which end most of our major sanitary practice is directed. It should be understood at once that these diseases are caused, with few exceptions, by microscopic vegetable parasites growing in the bodies of affected persons, that the organisms are contained in and thrown off with the secretions and excretions of the body, and that they are transmitted from person to person only by the transfer of the causative organism from person to person. In the infectious diseases we are dealing with a subtle and elusive enemy, one whose movements are difficult to follow; but whether followed or not there must always be a material transfer of some substance containing disease germs before infection can take place. It does not need to pass directly from one person to another; the route may be devious and obscure; but whether direct or devious, the source is invariably a previous infection. It logically follows that the fundamental necessity in preventing the spread of infectious diseases is to prevent the promiscuous distribution of the secretions and excretions of infected human beings. They must be so disposed of that they will

not contaminate the air, or the food, or the drink that is to be taken into the bodies of other individuals.

When we cough, or sneeze, or speak aloud, we expel a finely divided and invisible spray into the air in front of the face. It is not carried far; unless borne up by air currents it rapidly settles upon the floor or surrounding objects. But if some one stands near enough to breathe immediately into his lungs our spray-laden expelled air, he may get our disease. When we drink from a cup we leave a little saliva on the rim; another, drinking, may swallow it. Fingers, soiled with urine or feces containing typhoid bacilli, in handling food for another's consumption may transmit typhoid fever. Sputum dried upon the floor may be ground to dust, blown up by the wind, and enter the lungs of him who breathes the air.

From all of which it is apparent that infection in occupied places may be contracted in three ways—1, by direct transmission from person to person through the agency of mouth spray and intimate personal contact; 2, by indirect transmission through food and drink and from the common use of utensils or other facilities for comfort and convenience; and, 3, from infected premises. So far as railway cars are concerned, the first of these is the most important. With the exception of a few diseases which are generally conveyed through food and drink, such as typhoid fever, the accumulating evidence of recent years is making it more and more clear that the majority of transmissible infections are passed with relative directness from person to person. We are coming to understand that people, and not things, are the chief agents of disease transmission as well as the sources of infection; that the thing that counts is the actual presence of the infected person.

Applying this brief statement of principles to the subject under discussion, it becomes obvious that the first and foremost necessity in protecting those who travel is to keep out of cars all people who are known to be infected with communicable diseases. I do not need to point out the difficulties which confront the railroads in attempting to do this. Under their legal obligation to furnish transportation they have little power to discriminate among those who apply for it. It is not possible to refuse accommodation except under certain well-defined conditions, which, in so far as the communicable diseases are concerned, must include a definite diagnosis, and this the railroads are not, and can not be, prepared to make. Since, in the nature of things, the infected person is the one most likely to be informed, the proper remedy would seem to lie in legislation placing the responsibility on the passengers themselves and making it illegal for those afflicted with communicable diseases to ask for or to accept transportation from common carriers.

Such legislation has been passed in one form or another in some 28 States, but there has been little attempt to enforce its provisions or to make them generally known. In addition to these State laws, there has just been issued by the Federal Government a revision of the Interstate Quarantine Regulations, which denies absolutely to all persons having the more dangerous and readily transmitted infectious diseases the right to enter public conveyances, and which on all those with infections that are less readily transferred puts such restrictions as will render them without danger to other travelers. The regulations are so designed as to protect the railways in their refusal to carry people with transmissible diseases and to place upon the traveler the responsibility of declaring his condition. This is as it should be. But the railways may help, and should help, to make the regulations effective by willing compliance when their case is clear, and by insisting that their patrons also comply with those sections which relate to them.

To the extent that these regulations can prevent the dangerously infected from traveling, they will protect the public health. But, unfortunately, the infected person can not always be identified. Only pronounced disease is commonly recognized on brief inspection, and infection does not always cause pronounced disease. One may be infected with the virulent germs of a disease and yet not be sick of it, or his illness may be no more than a slight indisposition, the real nature of which he does not even suspect. Many people are so afflicted. A mild sore throat may be diphtheria; a trifling rash may be smallpox, measles, or scarlet fever; a little cough which scarcely discommodates the patient may throw myriads of tubercle bacilli into the surrounding air. Even typhoid fever, generally a serious and prolonged disease, does not always bring its victim to his bed. There are people also who, for months or years after recovery, harbor the bacteria of an infection from which they have previously suffered, and who remain entirely well while they constantly spread their virulent germs about them.

From these mild cases, and from these infected well who are known as "carriers," severe cases may be acquired by those who are more susceptible. It follows, therefore, that regulations segregating the known cases of communicable diseases from cars is only a partial protection to the well; and, while the actually sick are the more important element in spreading the acute infections, some chances must always be taken from those whose disease is not apparent. Until each passenger has grasped, and has applied for his own and his fellows' protection, the idea of nonpromiscuity in his personal relations and in the disposal of his body's products, there can be little improvement in this feature of public assemblage. It is simply a

question of applying the golden rule: Refrain from sneezing in your neighbor's face. Each one must learn to keep his own secretions to himself and each to avoid the secretions of others. And he who knows himself to be a source of danger should be doubly careful. The world is sadly in need of education along this line.

One of the most serious communicable diseases to which travelers are exposed is pulmonary tuberculosis. While it may be contracted in various ways, direct transmission through the medium of mouth spray is probably one of the most frequent and important. Although its prevalence and destructiveness are appalling, public sentiment will not approve of limiting greatly the movements of its victims. The railroads can not deny them transportation as dangerous passengers while they are permitted the freedom of all other places, public and private. It would undoubtedly be a valuable public-health measure to restrict the freedom of the tuberculous; but their number is so great, their disease is so chronic in its course and leaves them so long in comparative health and comfort that segregation is entirely impractical. The almost universal belief that changes of climate may hasten their recovery keeps them traveling in search of health.

We are all undoubtedly exposed to this widespread infection many times in our lives. Childhood is believed to be the period of greatest susceptibility to infection. Necropsy records are said to show that nearly all adults have actually been infected at some time, so that the little more exposure involved in the health seeker's travel is probably of no great consequence. It is an infection which seems to be slowly acquired by intimate contact and by long exposure, and the time of exposure in railway cars is neither long nor necessarily close. Careful habits in disposing of mouth secretions and in protecting the air from mouth spray can so nearly overcome the danger that it practically disappears. The new Interstate Quarantine Code recognizes this and permits the tuberculous to occupy cars, but it prescribes that they must be provided with and must use the means of preventing contamination of their surroundings. The railways can improve their sanitary efficiency and aid in protecting their patrons by enforcing the regulation.

It is often proposed that special cars should be furnished for the diseased, especially for the tuberculous. Leaving aside the serious economic difficulty, it would be impossible to get more than a small proportion of the tuberculous into such special cars. It is not the bedridden consumptive who presents the greatest danger of infecting his associates. Him we can identify and control. Far more important is the patient, either unsuspected or showing no conclusive evidence of his disease, who travels as a healthy individual, for of this class there are many more going about the world than of those

severely sick. So the question remains not so much one of who shall use the car as of the habits of those who use it.

In this connection I scarcely need to allude to the duty of the railroads to furnish healthy crews for trains and to prevent overcrowding of cars. While the latter evil is largely confined to suburban traffic, the long-run day coach is not always free from blame. When they have done these things, and have done all they can to keep communicable diseases out of their cars, the railways have discharged their duty in relation to the direct transmission of disease. But what may they do to prevent its indirect transmission by reason of the common use of facilities for comfort and convenience?

While pathogenic organisms are mainly parasitic, growing only in the body of a host, they may remain viable for a considerable time outside the body and produce disease if they gain entrance. The contraction of disease by infection is so largely a matter of individual resistance and susceptibility that it is impossible to generalize about it. The number of organisms which in one person produce a disease may be quite innocuous to another. As with poisons, there is always a dose too small to do damage; so that absolute sterility of the things we use, even freedom from pathogenic organisms, is not necessary for the great majority to escape infection. But contamination of the things we use is always potentially dangerous, and it is right that the railroad should be required to provide facilities whereby the use of contaminated things may be avoided and its passengers may carry out to the utmost their own protection.

One of the things through which disease is most readily transmitted by the indirect route is the common drinking cup. Infected lips leave bacteria on the rim, and other lips pick them up. Ten years ago the common cup was universal on railway trains; now it is a thing of the past. Thanks to the initial temerity of Kansas in 1907, a reform was started which has now become complete. The common towel was another very real evil. It has gone the way of the cup. The comb and brush, while less important, should be induced to make a similar exit.

Ample provision should be made in all railway cars for travelers to keep their hands and faces clean. Lavatories should be conveniently located, supplied with an abundance of water, well drained and trapped, and should have smooth surfaces for easy cleaning. Towels should be constantly at hand and in sufficient quantity for individual use. There should be a place for brushing the teeth—a dental lavatory—in all cars which make long journeys. Using a wash basin for this purpose is to make a cuspidor of it.

Toilets should be always available, well flushed, perfectly emptying, and capable of easy cleaning. The old type of open hopper, with its up draft of wind and dust and its nearly constant fouling, is

disagreeable, and passengers avoid its use, to the detriment of health. Cuspidors should be provided that spitting may not become an insanitary nuisance. Though it is often insisted upon by laws and regulations, the disinfection of cuspidors and toilets is largely æsthetic and sentimental. What goes into them is not touched, can not fly into the air, and has gone where it will not do harm; and unless it becomes a nuisance to sight or smell, our attention should be directed rather to discharges which fail to reach their proper place of disposal. The fallacious drip machine—the so-called continuous toilet disinfector—should be mentioned only to be condemned. It does not disinfect; it only distils an odor, sometimes worse than the one it tries to hide, and diverts attention from conditions that need mending.

Day coaches should have cans for garbage and refuse. Not that garbage and refuse carry infectious diseases—that is another of the fallacies of popular thought—but particles of food and other rubbish may be picked up from dirty floors by children or taken by them from a cuspidor in the mouth of which it lodges.

An ample supply of pure and wholesome drinking water is always necessary. It should be supplied and stored in such a way that it can not readily be contaminated by passengers. Ice that goes into the water should also be pure and clean, and must not be handled with bare hands which may be the carriers of excretions and disease. Better yet, ice should not go into the water at all, but into a separate compartment of the cooler, as is now required by some of the States and is being carried out by numerous corporations regardless of regulation.

In the dining car we meet the most important of the problems of indirect transmission of disease. Many of the infections may be contracted through the medium of food and drink, and some of them, as typhoid fever, are commonly transmitted in this way. Cleanliness in the preparation and handling of food is therefore all important to the public health. Especially milk and cream and vegetables to be eaten raw must be produced and stored in such a way as to avoid contamination. But more important still is the supervision of the health of dining-car employees to the end that those harboring transmissible infections may be excluded from the service. Periodic examination of cooks and waiters should be made at frequent intervals, certainly not longer than quarterly or half yearly, and those found infected with tuberculosis, venereal diseases, typhoid fever, diphtheria, etc., should be dismissed until complete recovery has taken place.

The typhoid "carrier" is an especially dangerous person in the kitchen. Numerous small epidemics of the disease have had such a

starting place, the infection being carried to food in course of preparation by hands contaminated with human discharges. Every dining car should have a lavatory for the crew, and the most rigid supervision should be instituted to see that it is always patronized and that the nails are properly manicured before beginning service. Some railroads now provide for this examination and supervision. It is only a question of time when all will be compelled to do so, and perhaps also to inoculate their dining-car crews against typhoid.

The sources of food supplies should be chosen on the basis of the purity of their products, and the food should be handled in such a manner that it can not become contaminated with human excretions. It must be protected from flies, which breed in filth, feed on filth, and deposit filth where they alight. No argument can excuse their presence in the dining room, nor on food in process of preparation or transfer to the cars.

There has been much comment during the last few years on the use of the finger bowl, with proposals here and there to abolish it entirely. The harm it does is problematic; I believe it is insignificant and practically negligible; but the care of drinking glasses and of eating utensils is of genuine importance. They should pass through boiling water before they are served to patrons.

There has occasionally been severe criticism of those railroads which allow their crews to sleep in dining cars. The practice is undesirable from an operating standpoint, but under some conditions it is almost unavoidable, and I can not see that it does any harm from the hygienic standpoint.

When we come to consider hangings, linen and bedding, floors, carpets and upholstery, and their possible relation to the health of travelers, we are brought to a discussion of the third method of possible infection in railway travel, namely, by the car itself being infected in such a way as to be dangerous to its occupants. This is dealing simply with a new phase of the question of indirect transmission of disease—indirect transmission from previous passengers or from extraneous sources through the medium of infected premises.

Very little experimental work has been done on the bacteriology of the railway coach. The best was carried out by Kinyoun many years ago. He found various pathogenic organisms in the dust from the floors and furnishings of cars, but only a few of them retained their virulence, and these in slight degree. Since all human beings are to a certain degree infected, the places they occupy are also infected to some extent, and Kinyoun's results are only what might have been expected; they are the common findings of all inhabited places. They have been amply confirmed for other habitations and go to support my earlier contention that cars and houses lie in the same hygienic category and are subject to the same sanitary laws.

Though we must expect most cars to contain pathogenic bacteria in greater or lesser numbers, their presence is no proof of a dangerous degree of infection. Much evidence has been accumulated in recent years which seems to show that the places vacated by the sick are without danger to the well unless very gross contamination has occurred and no adequate precautions have been taken to destroy it. In order to acquire an infectious disease we must receive organisms in sufficient quantity and of a sufficient degree of virulence, and neither the quantity nor the virulence is liable to be great enough in cars to transmit a disease to their occupants.

It is nevertheless desirable that the railroads should take precautions to keep car infection down to a minimum. This may be done in two ways: By mechanical cleaning, which removes the bacteria; or by fumigation, which kills them. Of the two methods, the former is much the more important. Mechanical cleaning will not remove all the bacteria, for it can not remove the last particle of dust or dirt in which they are contained; but if it is well done, not enough will remain to be of any danger to passengers who use the car.

The method used in the cleaning of cars is of less importance than the effect produced, which must be reasonable cleanliness in all instances. For bare floors, toilets, woodwork, and utensils, soap, water, and elbow work are the important ingredients which must enter into the process. For dislodging dust from corners and angles, an air blast is both rapid and efficient. For removing it from carpets and fabrics, the vacuum process is best; it not only removes the dust, but collects it for final and quick disposal. But vacuum cleaning without sufficient power is a makeshift. It requires at least the equivalent of 1 horsepower, with not more than 50 feet of hose, to operate a single sweeper effectively. Some two years ago, as a member of a committee to investigate car cleaning, I went through this subject in an experimental way. In the beginning of the investigation there was no vacuum machine on the market which was well adapted to the work in car-cleaning yards, but one was soon developed which not only does better cleaning than the older compressed-air process but also does it cheaper, as has been amply verified by two years of practical application.

Ten years ago there was an epidemic of regulations requiring the fumigation of cars at frequent periodic intervals. If properly carried out, there is no doubt that fumigation will kill the vast majority of the bacteria in a car. But it is a procedure which has been much overworked in the past and which is not a proper substitute for thorough mechanical cleaning. Good cleaning is necessary in any event; and after it has been done not enough bacteria will remain to be of any real hygienic significance. In recognition of this fact the movement for periodic fumigation is now dying out. The tendency

is rather to require it only after serious infectious diseases are known to have been carried, as is done by the new Interstate Quarantine Code. No reasonable objection can be made to that demand; and, even though the good it does is questionable, the roads should adopt the plan as a part of their own regulations.

In addition to providing for the sanitary arrangements outlined above, the roads have another duty in relation to the infectious diseases, and that is to instruct their employees in the principles that govern the protection of public health, to make rules for their sanitary guidance, and to see that these are obeyed. Instruction in this regard I look upon as important. I believe it can be made very useful in railway sanitary work. Some two years ago I prepared for the instruction of Pullman employees a little pamphlet in which I attempted to show, by means of a brief and simple statement of the origin of infectious diseases and the modes of their transmission, the reason for the existence of certain rules with which employees must comply, in the belief that better compliance will be obtained when the reason is understood. While the pamphlet deals with a few things beside the infectious diseases, such as heating and ventilation, it concerns those diseases chiefly, and attempts to state in simple language what influence the actions of employees may have in aiding or preventing their indirect transmission. The rules are only such as ought to apply in all railway service. They prohibit dry sweeping, dusting, and brushing, and the use of the common cup; they refer to the care of ice and water, to the cleaning of cuspidors, basins, and hoppers, and to the use of disinfectants and fumigation.

The miscellaneous influences constituting the third group of the dangers of railway travel, as I have outlined them, affect the health of car occupants only indirectly. They tend to reduce resistance rather than to produce disease directly. Certain individuals have peculiar susceptibilities of the nervous system rendering them liable to attacks of car sickness during any extended journey. There are people, too, who almost invariably have attacks of migraine, or sick headache, under similar conditions. It is not possible to prevent these results in the predisposed, though smooth roadbeds and comfortable cars probably tend to lessen the liability of their occurrence.

In the planning of railway cars too little attention has been given to the shape of the seats. The ordinary car seat is not supremely comfortable, and the nervous strain of riding all day long on an uncomfortable seat can not be disregarded. The seat should be so shaped as to conform to the curve of the back, which it usually is not; it should be at the proper distance from the floor—many are now too high; it should extend high enough to support the head; and a foot rest in front adds greatly to its fitness for its intended purpose.

The lighting of cars at night would not seem to be a difficult task, and yet, with the exception of dining cars, which, for æsthetic reasons, have received the most attention, properly lighted cars are rare. The light should be evenly distributed, and so placed that it will not shine in the eyes with a direct glare. If exposed lamps are used they should be placed as high as possible; if placed low down they should be shaded or have opal or frosted globes. The low ceiling of the coach would seem to lend itself readily to the indirect or semidirect system of lighting, which is a nearer approach to the ideal.

Ventilation is an always vital sanitary problem. Good air is of prime importance to good health. Ten or twelve years ago attempts to supply good air to railway cars were generally failures. The problem seemed complicated and almost hopeless. It still has its difficult points, but thanks to the enlightening research of the last 10 years it is now much simplified. We have learned what good air is: It is air that bears a proper thermic relation to the body. It must be able to absorb the body heat as rapidly as formed, without being cold enough to produce discomfort. It must be warm, but not too warm; it must have motion, but not enough to cause a chilling draft; it must be changed constantly to prevent stagnation and overheating. When these conditions, which are purely physical, are complied with, practically all other things may be left out of consideration. The chemical changes brought about by respiration are ordinarily negligible.

Due to the high wind pressure to which running trains are constantly subjected, a surprising amount of air enters them even when no special provision is made for it. I believe the quantity can always be kept adequate by the application of a simple exhaust system, as is now done on many lines. A much more difficult problem than maintaining the air supply is the proper control of heat. If the temperature is carefully regulated to between 65° and 70° F. complaint of poor ventilation will rarely arise, even with impure air and a very small supply; but above 70° trouble comes quickly and we think there is not enough air being supplied to keep our lungs flushed out. That is not the trouble at all, for let the temperature drop to the lower sixties and the air supply remain the same and we think the amount too large. The income and the outgo of air create motion within the car. When the temperature is too high we need more motion, hence a larger air supply, to keep the body cool; when it is too low we need less motion, or a smaller air supply, to keep the body warm. The lungs and the function of respiration have nothing to do with this; it is entirely a surface function. The practical problem of ventilation is thus seen to be one of physics, not one of chemistry. Its purpose is not so much to supply pure air as to supply air that will maintain the body's thermic balance through

acting on its surface. Therein lies the reason that a fan can often be made to serve as good a purpose as an increased air supply.

With a simple exhaust system of ventilation, specific air inlets are not necessary unless cars are greatly crowded. Natural crevices, to which may be added open sashes in the end doors, will be sufficient. For supplying artificial heat, direct radiation is better than indirect. Little cold streams of incoming air, mixing with the warmer and stiller body of air within, contribute the stimulating variation of surface environment which is so necessary to comfort and health. Only when large quantities of cold air are admitted at one place is heating of the incoming stream desirable, and this is not a good plan for ventilating railway cars. When no artificial heat is needed, as in the warm summer months, nothing can take the place of open windows, for large streams of rapidly moving air are necessary to maintain the thermic balance of the body.

A certain amount of dust, smoke, and engine gases inevitably enters cars. This is, of course, liable to great variation. Smoke and gases are never really troublesome except in passing through tunnels, when they produce no more than temporary discomfort. I have examined many specimens of tunnel air and have found the gases of combustion always far below the point of danger.

Ordinary dust is of more importance because it is more prevalent and because it is possibly infectious. If not infectious it is at least irritating and uncomfortable, and prolonged breathing of a heavily dust-laden atmosphere predisposes to infections of the respiratory tract. Its sources from within the car should be limited by good cleaning, and by the prohibition of dry dusting, brushing, and sweeping while the car is occupied. When cleaning is well done and disturbance of car furnishings is avoided, carpets and plush are better than bare floors and smooth upholstery because they hold the dust that settles on them and prevent its redistribution.

The chief source of dust, and the only one of any real importance, is the roadbed. In hot, dry weather, when cars must be run with open windows, it is often troublesome. The best and about the only way to combat it successfully is by sprinkling the tracks with oil. This is now done on some lines where crude petroleum is plentiful and cheap.

The discussion of roadbed dust brings us to the one feature of the sanitation of railway cars which is entirely distinctive—which is unique from the very fact that the car is a mobile house—and which is strictly a railway problem. I refer to the disposal of sewage and to the subject of track pollution by human excretions. The problem of sewage disposal does not take on the same form in any other place, and certainly the method of solution on the railway can not be the same as that which is ordinarily applied to stable habitations.

Sewage from car toilets must either be dropped on the surface of the tracks or it must be received into some portable container.

As yet we do not know the whole hygienic significance of track pollution. It should be studied with care. Two things may conceivably bring danger—either discharges may be washed from the tracks into bodies of water which are used for domestic supply, or they may dry, become pulverized, be blown up as dust by the wind or passing trains, scattered to the neighborhood, or blown into passing cars. Our knowledge is now sufficient to assure us that the first of these dangers is real, and that where track drainage is into domestic reservoirs the protection of the reservoirs is demanded. While it is well known that bacteria are rapidly destroyed in running streams, the drainage from tracks may be much too direct for such action to take place, and where reservoirs are near the lines the drainage must be so arranged that contamination of the water supply will not occur.

It is by no means clear, however, that there is any danger of infection from roadbed dust, and against its probability stand several important facts. Railway tracks are almost universally exposed to sunlight, and sunlight is inimical to bacteria; it soon destroys the disease-producing kinds. Drying is also harmful to bacteria, though in a less degree. But drying and pulverization take time, which allows the natural destructive forces to act. By the time that sewage has dried on the tracks, become reduced to dust, and carried into the air in a finely divided state it is highly improbable that it can still contain pathogenic organisms in a virulent condition. It was shown by the investigations of Kinyoun, already referred to, that the dust outside of railway trains contains much fewer bacteria than that from within the cars. The evil would seem to lie in the dust as such—in the irritation caused by the breathing of pulverized earth, rock, and cinder—and not in the bacteria it contains. The discharge from car toilets can have no appreciable effect on its gross amount in the air about moving trains. It is comparable to the dust of streets, though it is produced more slowly and contains less organic matter. While the direct evidence is still not entirely clear, it seems to me that it may be quite right to believe that where domestic water supplies are not concerned track pollution is of little or no hygienic importance, and that when all the facts are known the many extravagant statements that have been made about it will find their proper level near the zero mark of sanitary significance.

LEPROSY, UNITED STATES, 1915.

Special blanks were sent to the health departments of States and to cities having a population of over 10,000 at the time of the 1910 census asking for information regarding the known occurrence of leprosy in their respective jurisdictions during the calendar year 1915. The following table gives the information furnished in the blanks returned. It is probable that there were a few known cases in cities from which no reports were received. Undoubtedly there were also a number of cases which were not reported because their existence was unknown to the health departments.

Reports of Leprosy, by States, for 1915.

State.	Reported during 1915.	Died or removed, 1915.	Present Dec. 31, 1915.	Isolated under State control.	Isolated under local control.	Not isolated.
District of Columbia.....			1		1	
Hawaii.....	70		670	670		
Lepers settlement, Molokai.....			614	614		
Kalihi Hospital, Honolulu.....			56	56		
Louisiana:						
Lepers Home of Louisiana.....			102	102		
Massachusetts.....	2		12	12		
Penikese Hospital.....			12	12		
Michigan.....			(¹)			
Bay City.....			1			
Big Rapids.....			1			
Three Rivers.....			1			
Minnesota.....	1		10	(²)	(³)	(⁴)
Albert Lea.....			1			
Cokato.....			1			
Elbow Lake.....			1			
Brown County—						
Linden Township.....			1			
Maple Bay.....			1			
Minneapolis.....			2			
Montevideo.....			1			
Freeborn County—						
Moscow Township.....			1			
St. Paul.....			1			
Oregon.....	1	⁵ 1				
Philippine Islands.....	841		4,472	3,972	250	250
Culion.....			3,680	3,680		
San Lazaro.....			292	292		
Various Provinces.....			⁶ 500		250	250
Porto Rico.....	3		37	37		
Leprosy colony.....			37	37		
Tennessee:						
Slayden.....	1	1				
Washington.....			(⁵)			

¹ The health officer estimates at least 15 cases in Michigan.

² The health officer states: "In one sense, none; in another sense, all, because we advise how these cases shall be handled. All cases, however, are practically isolated at home or in some institution. One case is isolated on a county poor farm."

³ Patient died Oct. 7, 1915.

⁴ Estimated.

⁵ Some cases at Diamond Head, not under State control.

Reports of Leprosy, by Cities, for 1915.

City.	Reported during 1915.	Died or removed, 1915.	Present Dec. 31, 1915.	Isolated under State control.	Isolated under local control.	Not isolated.
Ann Arbor, Mich.	1		1		1	
Boston, Mass.	2	2		2		
Chicago, Ill.	2	1	1		1	
Detroit, Mich.		1			1	
Jersey City, N. J.	1		1		1	
Kansas City, Mo.	1	1			1	
Los Angeles, Cal.	6		7		2	
Minneapolis, Minn.	1		1	(1)		
Mount Vernon, N. Y.	1	(5)				
New Orleans, La.	9	9		9		
New York, N. Y.	(6)		20		7	6
Oakland, Cal.	1		1		1	
Pawtucket, R. I.		1			1	
Philadelphia, Pa.			1		1	
Pittsburgh, Pa.	1	1			1	
Portland, Oreg.	1	(4)				
Reno, Nev.	10	10				
Richmond, Va.	(11)		11		1	
Riverside, Cal.	1	(12)				
Sacramento, Cal.	2		2		2	
St. Louis, Mo.	1		2		2	
San Antonio, Tex.	1	1	15			15
San Diego, Cal.	1	(13)				
San Francisco, Cal.	2		14		14	
Tacoma, Wash.	1	1			1	
Tampa, Fla.			1			1
Washington, D. C.			15		1	
Wilkes-Barre, Pa.			1		1	

¹ Patient died in August, 1915.

² Patient was deported to Mexico by immigration officials.

³ Isolated under county control.

⁴ Disposition of case not stated.

⁵ Was a New York City case—treated by a Mount Vernon physician.

⁶ The commissioner of health states: "Unless the case is an open one with discharging lesions and the home conditions are not suitable for adequate medical and nursing care, aside from reporting and tabulating and occasional inspection," no consideration is given.

⁷ The commissioner of health states: "Cases desiring hospital treatment are referred to department of public charities and admitted to their several hospitals—not isolated. This city does not segregate such cases."

⁸ Patient died in March, 1915.

⁹ Detained on premises of municipal hospital from Aug. 14 to Sept. 27, 1915.

¹⁰ Case came from California and was returned to that State.

¹¹ Was in Richmond from Dec. 20, 1915, but was not reported until Jan. 4, 1916.

¹² Disposition of case not stated.

¹³ Patient was a Japanese who had not been in the United States 3 years and was deported after 1 month's isolation.

¹⁴ The health officer states: "In the city of Tampa there is only 1 case, and 2 cases outside of the city limits."

¹⁵ This is the same case which is listed in the State table as being located in the District of Columbia.

PLAGUE-PREVENTION WORK.

CALIFORNIA.

The following report of plague-prevention work in California for the week ended July 22, 1916, was received from Senior Surg. Pierce, of the United States Public Health Service, in charge of the work:

FEDERAL AND COUNTY INSPECTION SERVICE.

[For enforcement of the law of June 7, 1913.]

Counties.	Number inspections.	Number re-inspections.	Acres inspected.	Reinspected.	Acres treated.			Holes treated.
					Pumps.	Waste balls.	Grain.	
Alameda.....		83		21,588		27	1,691	
Contra Costa.....		42		28,595			1,285	
Stanislaus.....	73	45	12,854	15,567	294	280	5,420	200
Monterey.....	51	4	39,302	2,570			850	
San Benito.....	51	10	30,790	27,157				
Santa Cruz.....		36		6,208			1,525	
Santa Clara.....	44	4	14,071	2,662		40	716	220
Total.....	219	224	97,017	104,347	294	347	11,487	420

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.

Counties.	Collected.	Examined.	Found infected.
Merced.....	258	258	(1)
Kern.....	78	65	(1)
Total.....	336	323	(1)

¹ None.

RATS COLLECTED AND EXAMINED.

Oakland.....	35
Richmond.....	66
Pittsburg.....	61
Total.....	162

RANCHES INSPECTED AND HUNTED OVER.

Merced County.....	18
Kern County.....	6
Total.....	24

RECORD OF PLAGUE INFECTION.

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
Cities:				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	(1)	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	(1)	126 rats.
Berkeley.....	Aug. 28, 1907	(1)	(1)	(1).
Los Angeles.....	Aug. 11, 1908	(1)	Aug. 21, 1908	1 squirrel.
Counties:				
Alameda (exclusive of Oakland and Berkeley).	Sept. 21, 1909	Oct. 17, 1909 ²	June 23, 1916	283 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	(1)	June 28, 1916	1,629 squirrels.
Fresno.....	(1)	(1)	Oct. 27, 1911	1 squirrel.
Merced.....	(1)	(1)	May 12, 1916	7 squirrels.
Monterey.....	(1)	(1)	May 27, 1916	38 squirrels.
San Benito.....	June 4, 1913	(1)	July 1, 1916	72 squirrels.
San Joaquin.....	Sept. 18, 1911	(1)	Aug. 26, 1911	18 squirrels.
Santa Clara.....	Aug. 31, 1910	(1)	June 21, 1916	32 squirrels.
San Luis Obispo.....	(1)	(1)	Jan. 29, 1910	1 squirrel.
Santa Cruz.....	(1)	(1)	May 30, 1916	5 squirrels.
Stanislaus.....	(1)	(1)	June 2, 1911	18 squirrels.
San Mateo.....	(1)	(1)	June 21, 1916	1 squirrel.

¹ None.² Wood rat.

The work is being carried on in the following named counties: Alameda, Contra Costa, Stanislaus, San Benito, Santa Cruz, Kern, Monterey, Merced, and Santa Clara.

The following is a record of municipal work performed under the supervision of the United States Public Health Service:

OPERATIONS ON THE WATER FRONT—SAN FRANCISCO

Vessels inspected for rat guards.....	27
Reinspections made on vessels.....	4
Defective guards repaired.....	4
Rats trapped on wharves and water front...	39
Rats trapped on vessels.....	41
Number of traps set on wharves and water front.....	150
Number of traps set on vessels.....	72
Number of vessels trapped on.....	19
Poisons placed on water front (pieces).....	3,600
Bait used on water front and vessels, bacon (pounds).....	6
Amount of bread used in poisoning water front (loaves).....	12
Number of pounds of poison used on water front.....	4
Poisons placed within the Panama Pacific International Exposition grounds (pieces).....	36,000

COOPERATIVE MUNICIPAL WORK.

Premises inspected.....	745
Nuisances abated.....	99

COOPERATIVE MUNICIPAL WORK—continued.

Rats trapped.....	80
Rats sent to laboratory.....	80
Rats examined.....	72
Poisons placed.....	46,700
Garbage cans stamped approved.....	184
Rats identified:	
<i>Mus norvegicus</i>	22
<i>Mus rattus</i>	29
<i>Mus alexandrinus</i>	29

WORK DONE ON OLD BUILDINGS.

Wooden floors removed.....	22
Cubic feet new foundation walls installed...	3,600
Concrete floors installed (square feet, 16,270).....	11
Number of basements concrete (square feet, 3,000).....	3
Yards and passageways, etc., concreted (square feet, 1,405).....	8
Total area concrete laid (square feet).....	20,675
Number of floors rat-proofed with wire cloth (square feet, 1,400).....	2
Buildings razed.....	11

WASHINGTON—SEATTLE—PLAGUE ERADICATION.

The following report of plague-eradication work at Seattle for the week ended July 22, 1916, was received from Surg. Boggess, of the United States Public Health Service, in charge of the work:

RAT PROOFING.

New buildings inspected.....	17
New buildings reinspected.....	25
Basements concreted, new buildings (square feet, 9,275).....	10
Floors concreted, new buildings (square feet, 14,170).....	9
Yards, etc., concreted, new buildings (square feet, 2,225).....	2
Sidewalks concreted (square feet).....	16,280
Total concrete laid, new structures (square feet).....	41,950
New buildings elevated.....	3
New premises rat proofed, concrete.....	19
Old buildings inspected.....	3
Premises rat-proofed, concrete, old buildings.....	3
Floors concreted (square feet, 2,750).....	3
Wooden floors removed, old buildings.....	3
Buildings razed.....	2

LABORATORY AND RODENT OPERATIONS.

Dead rodents received.....	7
Rodents trapped and killed.....	161
Rodents recovered after fumigation.....	56
Total.....	224
Rodents examined for plague infection.....	131
Rodents proven plague-infected.....	None.
Poison distributed (pounds).....	15
Bodies examined for plague infection.....	2
Bodies found plague-infected.....	None.

CLASSIFICATION OF RODENTS.

<i>Mus rattus</i>	20
<i>Mus alexandrinus</i>	58
<i>Mus norvegicus</i>	116
<i>Mus musculus</i>	49
Unclassified.....	1

WATER FRONT.

Vessels inspected and histories recorded.....	18
Vessels fumigated.....	4
Sulphur used, pounds.....	5,360
New rat guards installed.....	18
Defective rat guards repaired.....	9
Fumigation certificates issued.....	4
Port sanitary statements issued.....	48

The usual day and night patrol was maintained to enforce rat guarding and fending.

MISCELLANEOUS WORK.

Letters sent in re rat complaints.....	4
Health lectures.....	1

RODENTS EXAMINED IN EVERETT.

<i>Mus norvegicus</i> trapped.....	56
<i>Mus alexandrinus</i> trapped.....	4
Found dead.....	1
<i>Mus musculus</i> trapped.....	1
Total.....	62
Rodents examined for plague infection.....	62
Rodents proven plague infected.....	None.

RAT-PROOFING OPERATIONS IN EVERETT.

New buildings inspected.....	3
New buildings reinspected.....	11
New buildings, concrete foundations.....	2
New buildings elevated.....	1
New building, floor concreted (442 square feet).....	1
New buildings, yards concreted (564 square feet).....	3
Total concrete, 1,006 square feet.	

RODENTS EXAMINED IN TACOMA.

Mus norvegicus trapped.....	55
Rodents examined for plague infection.....	55
Rodents proven plague infected.....	None.

HAWAII—HONOLULU—PLAGUE PREVENTION.

The following reports of plague-prevention work at Honolulu were received from Surg. Trotter, of the United States Public Health Service:

WEEK ENDED JULY 8, 1916.

Total rats and mongoose taken.....	320	Classification of rats trapped—Continued.	
Rats trapped.....	314	Mus norvegicus.....	32
Mongoose trapped.....	2	Mus rattus.....	8
Rats killed by sulphur dioxide.....	4	Classification of rats killed by sulphur dioxide:	
Examined microscopically.....	248	Mus alexandrinus.....	4
Examined macroscopically.....	72	Average number of traps set daily.....	984
Showing plague infection.....	None.	Cost per rat destroyed.....cents..	23½
Classification of rats trapped:			
Mus alexandrinus.....	128		
Mus musculus.....	146		

WEEK ENDED JULY 15, 1916.

Total rats and mongoose taken.....	358	Average number of traps set daily.....	984
Rats trapped.....	343	Cost per rat destroyed.....cents..	21½
Rats killed by sulphur dioxide.....	15	Last case rat plague, Aiea, 9 miles from Honolulu, Apr. 12, 1910.	
Examined microscopically.....	292	Last case human plague, Honolulu, July 12, 1910.	
Examined macroscopically.....	66	Last case rat plague, Paauhau, Hawaii, Jan. 18, 1916.	
Showing plague infection.....	None.	Last case human plague, Paauhau Plantation, Hawaii, Dec. 16, 1915.	
Classification of rats trapped:			
Mus alexandrinus.....	132		
Mus musculus.....	165		
Mus norvegicus.....	40		
Mus rattus.....	6		
Classification of rats killed by sulphur dioxide:			
Mus musculus.....	1		
Mus rattus.....	14		

PORTO RICO—PLAGUE PREVENTION.

The following table shows the number of rats and mice examined in Porto Rico for plague infection during the two weeks ended July 15, 1916. No plague infection was found.

Place.	Rats.	Mice.
San Juan.....	148	12
Santurce.....	119	19

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CEREBROSPINAL MENINGITIS.

Massachusetts—Boston—Immigration Station.

Acting Asst. Surg. Nute reported a case of cerebrospinal meningitis at the immigration station, Boston, Mass., in the person of C. M., male, age 23 years, nativity Italy, arrived at Boston July 28, 1916, on the steamship *Cretic*. The disease developed July 30 while the man was under detention for observation in the immigration station.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass.....	2	1	Los Angeles, Cal.....	1	
Bridgeport, Conn.....	1	1	Lowell, Mass.....	1	
Cambridge, Mass.....	1		New Bedford, Mass.....		1
Chicago, Ill.....	3	1	New York, N. Y.....	3	4
Chicopee, Mass.....		1	Philadelphia, Pa.....	1	
Cleveland, Ohio.....		2	Providence, R. I.....		1
Dubuque, Iowa.....	1	1	Steubenville, Ohio.....	1	
Lexington, Ky.....		1			

DENGUE.

Texas—Brownsville.

Surg. Lloyd reported, July 28, 1916, the prevalence of dengue in Brownsville, Tex.

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2162.

ERYSIPELAS.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Ann Harbor, Mich.....	1		Philadelphia, Pa.....	3	1
Buffalo, N. Y.....	3		Pittsburgh, Pa.....	3	
Butte, Mont.....	1		St. Joseph, Mo.....	1	
Chicago, Ill.....	14	4	St. Louis, Mo.....	3	
Cleveland, Ohio.....	1	2	San Francisco, Cal.....	3	1
Denver, Colo.....	2		Williamsport, Pa.....	1	
Detroit, Mich.....	2	2	Woburn, Mass.....		1
Milwaukee, Wis.....	4	1			

MALARIA.**City Reports for Week Ended July 22, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Berkeley, Cal.....	1	.....	Mobile, Ala.....	.....	1
Birmingham, Ala.....	2	2	New Orleans, La.....	7	1
Charleston, S. C.....	.....	2	Newton, Mass.....	1	.....
Jersey City, N. J.....	1	.....	Richmond, Va.....	1	.....
Kansas City, Mo.....	.....	1	Stockton, Cal.....	1	.....

MEASLES.**Alaska—Possession Point.**

Passed Asst. Surg. Krulish reported by telegraph, August 5, 1916, that 23 cases of measles had been reported among natives at Possession Point, Alaska.

Washington—Seattle.

Surg. Boggess reported that during the week ended July 29, 1916, 17 new cases of measles were notified in Seattle, Wash., making a total of 5,346 cases, with 9 deaths, since the beginning of the epidemic, February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, p. 2162.

PELLAGRA.**City Reports for Week Ended July 22, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Austin, Tex.....	1	.....	Mobile, Ala.....	.....	1
Birmingham, Ala.....	1	1	Nashville, Tenn.....	40	.....
Charleston, S. C.....	.....	4	New Orleans, La.....	2	.....
Chattanooga, Tenn.....	2	.....	Oklahoma, Okla.....	.....	1
Cleveland, Ohio.....	1	.....	Washington, D. C.....	2	1
Columbia, S. C.....	.....	3			

PLAGUE.**Louisiana—McDonoughville—Plague-Infected Rat Found.**

Passed Asst. Surg. Simpson reported that a rat trapped July 15, 1916, in the yard of a grocery located at Perry and Teche Streets, McDonoughville (Gretna), La., was proven positive for plague infection July 30, 1916.

Louisiana—New Orleans—Plague Infected Rat Found.

Passed Asst. Surg. Simpson reported that a rat trapped July 3, 1916, at 2317 St. Claude Avenue, New Orleans, La., was proven positive for plague infection July 31, 1916.

PNEUMONIA.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Binghamton, N. Y.	2	1	McKeesport, Pa.	1	.....
Chicago, Ill.	63	39	Morristown, N. J.	1	.....
Cleveland, Ohio.	11	7	Pasadena, Cal.	1	.....
Detroit, Mich.	1	4	Philadelphia, Pa.	17	13
Harrison, N. J.	1	.....	Pittsburgh, Pa.	7	8
Kalamazoo, Mich.	1	.....	San Francisco, Cal.	8	7
Kansas City, Mo.	1	.....	Stockton, Cal.	3	.....
Los Angeles, Cal.	2	.....		

POLIOMYELITIS (INFANTILE PARALYSIS).

Alabama.

Birmingham—Jefferson County.—Surg. Fox reported August 1: Up to July 31 there were reported in the county of Jefferson 14 cases of infantile paralysis, and in the city of Birmingham up to the same date 10 cases.

California.

San Francisco.—Senior Surg. Pierce reported August 8: One new case of poliomyelitis occurred during the week ended August 7. Total number of cases to date 6.

Colorado.

Denver.—The health officer of Colorado reported August 3: One new case of poliomyelitis in Denver.

Illinois.

The health officer of Illinois reported August 5: Cases of acute poliomyelitis reported from July 1 to August 5, inclusive, and confirmed by inspectors of the State board of health, are as follows: Standard 2, quarantine terminated; Streator 3, 1 terminated; Gibson City 1, terminated; Kankakee 2, 1 terminated; Chicago 51, 6 terminated and 3 dead; Blue Island 2, terminated; near Oregon 2, 1 terminated; East St. Louis 5, 2 terminated; Belleville 5, 4 terminated; Freeport 2; Quincy 1; Virden 2; near Cherry 2, 1 dead; Eureka 2; near Dalton City 2; near Maroa 1; Dixon 2, 1 terminated; Simpson 1; near Beecher City 1; Olive Branch 1, dead; Sidney 1; Lovington 1; near Tamms 1, dead; Carrier Mills 1; near Kansas 1; Benld 1; Franklin Heights 2, 1 dead; Elizabethtown 1, terminated; near Galena 1; Collinsville 2; near Ottawa 1; near Staunton 1; near Hinckley 1, dead; near Ridge Farm 1, terminated; near Hammond 1; DuQuoin 1, terminated; near Long Creek 1; Oakland 1; Bement 1; Winnebago 1; Jerseyville 1, dead; near Harmon 1; Ottawa 3, 1 dead; Lebanon 1; near Lemont 1; Sheldon 1; Des Plaines 1; near Albany 1; near Atwood 1; Evanston 2; near Caseyville 2; near Triumph 1;

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**Illinois**—Continued.

near Beckemeyer 1; near Carlyle 1, dead; Canton 1; near Maroa 1; Fenton 1; Rock Island 1; Argenta 2; Moline 1; St. Joseph 1; Decatur 1; Monticello 1; Pontiac 1; near Ashmore 2; near Makanda 1; Rockford 1; Stewardson 1; and Carlyle 1, dead.

Two cases at Evanston and one each at the following places are under investigation: Near Arcola, Brimfield, Indianola (dead), Mark, near Hammond, Montrose, and Mount Olive.

Maryland.

Baltimore.—Surg. Vogel reported August 3: Case poliomyelitis, B. L., 16 months, 327 West Twenty-eighth Street, isolated in hospital. No connection with other cases. August 5: Patient died at 4 a. m. on the 4th instant. August 7: Deaths yesterday from poliomyelitis, J. J., colored, 23 months, 110 West Lexington Street; J. L., 10 months, reported July 5, died this morning.

Michigan.

Detroit.—Senior Surg. Austin reported August 1: Additional cases poliomyelitis, E. B., 5 years, 169 Baron Street, reported July 30; D. L., 15 months, 571 Green Avenue, reported July 31; R. S., 9 months, 335 Fort Street West, reported July 31. August 4: The tenth case of infantile paralysis reported by the board of health of Detroit August 3 in a boy, 6 years, residing at 95 Dennis Street.

Montana.

The State health officer of Montana reported August 8: Four cases in Billings and three rural cases in one locality 40 miles southwest of Billings, in Carbon County, near Crow Indian Reservation.

New Jersey.

The State department of health of New Jersey reported August 3: Cases of poliomyelitis have been reported from July 1 to August 2, inclusive, as follows:

Place.	Cases.	Place.	Cases.
Atlantic County:		Bergen County—Continued.	
Atlantic City.....	1	Rivervale Township.....	1
Bergen County:		Rutherford Borough.....	1
Carlstadt Borough.....	1	Saddle River Township.....	1
Cresskill Borough.....	1	East Rutherford Borough.....	1
East Paterson Borough.....	1	Burlington County:	
Fairview Borough.....	1	Burlington.....	1
Glen Rock Borough.....	1	Camden County:	
Hackensack Town.....	1	Camden.....	3
Hobokus Township.....	1	Collingswood Borough.....	1
Garfield Borough.....	2	Gloucester City.....	2
Lodi Borough.....	1	Gloucester Township.....	1
Northvale Borough.....	3	Pensauken Township.....	1
Oakland Borough.....	2	Cumberland County:	
Ridgewood Village.....	1	Fairfield Township.....	1

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

New Jersey—Continued.

Place.	Cases.	Place.	Cases.
Essex County:		Middlesex County—Continued.	
Belleville Township.....	2	Spottswood Borough.....	1
Bloomfield Town.....	2	Woodbridge Township.....	6
East Orange.....	8	Fiscataway Township.....	1
Glen Ridge Borough.....	1	Monmouth County:	
Irrington Town.....	12	Allenhurst Borough.....	2
Millburn Township.....	4	Belmar Borough.....	1
Montclair Town.....	4	Bradley Beach Borough.....	1
Newark.....	309	Avon Borough.....	1
Nutley Borough.....	2	Highlands Borough.....	3
Orange.....	21	Long Branch.....	1
South Orange.....	12	Red Bank Borough.....	2
Verona Borough.....	1	Raritan Township.....	2
West Orange Town.....	4	Spring Lake Borough.....	4
Gloucester County:		Wall Township.....	1
National Park Borough.....	1	Morris County:	
Hudson County:		Boonton Borough.....	1
Bayonne.....	2	Hanover Township.....	5
East Newark Borough.....	1	Madison Borough.....	2
Guttenberg Town.....	4	Passaic Township.....	2
Hoboken.....	6	Randolph Township.....	1
Harrison Town.....	7	Rockaway Township.....	1
Jersey City.....	41	Ocean County:	
Kearny Town.....	5	Lacey Township.....	1
North Bergen Township.....	20	Passaic County:	
Town of Union.....	24	Acquackanonk Township.....	6
Weehawken Township.....	7	Haledon Borough.....	1
West Hoboken Town.....	16	Paterson.....	5
West New York Town.....	18	Passaic.....	1
Hunterdon County:		Somerset County:	
Delaware Township.....	2	Somerville Borough.....	1
East Amwell Township.....	1	Union County:	
Flemington Borough.....	1	Elizabeth.....	2
Readington Township.....	3	Fanwood Borough.....	2
Mercer County:		Hillside Township.....	1
Trenton.....	3	Linden Borough.....	4
Middlesex County:		Linden Township.....	4
Metuchen Borough.....	2	New Providence Township.....	1
Monroe Township.....	1	Plainfield.....	6
New Brunswick.....	1	Rahway.....	3
Perth Amboy.....	10	Union Township.....	4
Raritan Township.....	2	Westfield Town.....	2
Roosevelt Borough.....	2		
South Amboy.....	1		
South Brunswick Township.....	6		
		Total.....	682

The State Department of Health of New Jersey has also furnished the following figures, which show the cases reported to health authorities in New Jersey August 3, 4, and 5, 1916:

Place.	Cases.	Place.	Cases.
Atlantic County:		Essex County—Continued.	
Atlantic City.....	1	Newark.....	62
Bergen County:		Nutley.....	1
Palisade Township.....	1	Orange.....	9
Ridgefield Park.....	1	South Orange Township.....	2
Rutherford.....	1	West Orange.....	3
Burlington County:		Hudson County:	
Chester Township.....	2	Bayonne.....	4
Delran Township.....	1	Guttenberg.....	2
Camden County:		Hoboken.....	1
Camden.....	5	Jersey City.....	9
Cumberland County:		Kearny.....	2
Deerfield Township.....	2	North Bergen.....	2
Stow Creek Township.....	1	West Hoboken.....	3
Essex County:		West New York.....	5
Belleville.....	4	Hunterdon County:	
East Orange.....	2	Clinton Township.....	1
Essex Fells.....	1	Mercer County:	
Irrington.....	13	Ewing.....	1
Millburn.....	3	Princeton.....	2

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**New Jersey—Continued.**

Place.	Cases.	Place.	Cases.
Middlesex County:		Passaic County:	
Monroe Township.....	1	Paterson.....	3
New Brunswick.....	2	Somerset County:	
Perth Amboy.....	4	Bound Brook.....	2
Woodbridge Township.....	1	North Plainfield Borough.....	1
Monmouth County:		North Plainfield Township.....	3
Asbury Park.....	1	Sussex County:	
Avon.....	1	Newton.....	1
Highlands.....	1	Union County:	
Howell Township.....	1	Elizabeth.....	2
Ocean Township.....	1	Garwood.....	1
Spring Lake.....	8	Hillside Township.....	2
Morris County:		Plainfield.....	1
Danville Township.....	1	Summit, city.....	1
Randolph Township.....	2	Union, town.....	6
Ocean County:		Total.....	199
Bayhead.....	1		

Perth Amboy.—Acting Asst. Surg. Naulty reported August 7: Week ending to-day, 8 new cases poliomyelitis, 3 deaths. Total, 18 cases, 7 deaths.

New York.

In the Public Health Reports of July 28, 1916, page 2011, was published a list of cases of poliomyelitis in New York State, exclusive of New York City, as reported during the period from June 13 to July 19, 1916. The following table shows by counties the cases reported later, to and including August 2, 1916.

Cases of poliomyelitis reported in New York State, exclusive of New York City.

Place.	Cases.	Place.	Cases.
Albany.....	2	Otsego.....	1
Broome.....	2	Putnam.....	2
Chautauqua.....	2	Rensselaer.....	3
Columbia.....	20	Rockland.....	9
Delaware.....	1	Saratoga.....	4
Dutchess.....	57	Steuben.....	2
Genesee.....	1	Suffolk.....	34
Greene.....	2	Sullivan.....	18
Hamilton.....	1	Tioga.....	1
Jefferson.....	2	Ulster.....	23
Monroe.....	3	Warren.....	1
Nassau.....	80	Westchester.....	40
Oneida.....	5	Wyoming.....	1
Orange.....	18	Total.....	336
Oswego.....	1		

New York City.—Surg. Lavinder reported August 3: New cases poliomyelitis 217, deaths 43, Manhattan shows sharp rise, Queens also. August 4: New cases 175, deaths 45. August 5: New cases 168, deaths 41. August 7: New cases reported yesterday 192, deaths 33; to-day cases 145, deaths 44. August 8: New cases 183, deaths 53. August 9: New cases 183, deaths 57; approximate totals 5,519 cases, 1,253 deaths.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**Ohio.**

Cincinnati.—Assistant Surg. Bolten reported July 31: A case of anterior poliomyelitis in a child aged 3 years was reported to the health department July 28, making 3 cases reported since July 12. One death has occurred.

Pennsylvania.

Philadelphia.—Senior Surg. Irwin reported August 4: Thirteen new cases of poliomyelitis to-day in Philadelphia.

Pittsburgh.—Surg. Schereschewsky reported August 7: Additional case poliomyelitis reported. Total, 6 cases, 1 death.

South Carolina.

Collaborating Epidemiologist Hayne reported August 6: Twenty-three cases poliomyelitis in this State, reported since July 1.

Spartanburg.—Passed Asst. Surg. Grimm reported August 6: One case poliomyelitis reported city of Spartanburg August 5. First case in 1916.

Spartanburg County.—Asst. Surg. Wheeler reported August 2: A fatal case of poliomyelitis in a colored girl 7 years old has been reported in a rural section of Spartanburg County, about 13 miles west of Spartanburg. First symptoms developed July 27 and death occurred July 29.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	2	.....	Mobile, Ala.	1	.....
Binghamton, N. Y.	1	.....	Montclair, N. J.	1	.....
Birmingham, Ala.	1	.....	New Bedford, Mass.	4	.....
Boston, Mass.	3	.....	New London, Conn.	1	2
Bridgeport, Conn.	4	.....	New Orleans, La.	2	.....
Buffalo, N. Y.	1	.....	New York, N. Y.	741	189
Chicago, Ill.	10	.....	North Adams, Mass.	4	3
Cincinnati, Ohio.	1	1	Omaha, Nebr.	1	.....
Cleveland, Ohio.	2	1	Orange, N. J.	2	2
Columbus, Ohio.	1	.....	Pawtucket, R. I.	2	.....
Davenport, Iowa.	1	.....	Perth Amboy, N. J.	2	.....
Detroit, Mich.	1	.....	Philadelphia, Pa.	9	1
East Orange, N. J.	1	.....	Pittsburgh, Pa.	1	1
Elizabeth, N. J.	1	2	Pittsfield, Mass.	1	1
Erie, Pa.	1	.....	Plainfield, N. J.	2	.....
Evansville, Ind.	1	.....	Providence, R. I.	1	.....
Fall River, Mass.	1	.....	San Francisco, Cal.	2	.....
Grand Rapids, Mich.	2	.....	Saratoga Springs, N. Y.	1	.....
Harrison, N. J.	1	.....	Toledo, Ohio.	8	.....
Hartford, Conn.	1	1	Trenton, N. J.	1	.....
Indianapolis, Ind.	1	.....	Washington, D. C.	3	.....
Jersey City, N. J.	8	1	West Hoboken, N. J.	3	1
Lowell, Mass.	1	.....	Wilkes-Barre, Pa.	1	1
Lynchburg, Va.	1	.....	Worcester, Mass.	2	.....
Malden, Mass.	1	.....		

RABIES IN ANIMALS.**City Reports for Week Ended July 22, 1916.**

During the week ended July 22, 1916, there were reported, by cities, five cases of rabies in animals; one case at Detroit, Mich., one case at Los Angeles, Cal., and three cases at San Diego, Cal.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2162.

SMALLPOX.**Arkansas—Little Rock.**

Collaborating Epidemiologist Garrison reported by telegraph August 4, 1916, that 5 cases of smallpox had been notified in Little Rock, Ark.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Austin, Tex.....	3	.....	La Crosse, Wis.....	1	.....
Birmingham, Ala.....	5	.....	New Orleans, La.....	3	3
Cincinnati, Ohio.....	1	.....	Portland, Oreg.....	1	.....
Cleveland, Ohio.....	10	.....	Quincy, Ill.....	1	.....
Covington, Ky.....	1	.....	Sioux City, Iowa.....	2	.....
Detroit, Mich.....	9	.....	Springfield, Ill.....	2	.....
Grand Rapids, Mich.....	1	.....	Tacoma, Wash.....	1	.....
Kansas City, Mo.....	5	.....	Wichita, Kans.....	2	.....
Kokomo, Ind.....	11	.....		

TETANUS.**City Reports for Week Ended July 22, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Columbus, Ohio.....	.....	1	New Orleans, La.....	.....	1
El Paso, Tex.....	1	.....	Philadelphia, Pa.....	1	1
Erie, Pa.....	1	.....	San Francisco, Cal.....	1	.....
Lincoln, Nebr.....	1	.....	Wheeling, W. Va.....	1	1

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2162.

TYPHOID FEVER.

City Reports for Week Ended July 22, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	1		Los Angeles, Cal.	6	
Atlantic City, N. J.	4		Lowell, Mass.	1	
Baltimore, Md.	20	3	Lynchburg, Va.	4	1
Beaver Falls, Pa.	1		McKeesport, Pa.	2	
Birmingham, Ala.	43	7	Madison, Wis.	1	
Boston, Mass.	5	1	Malden, Mass.	2	
Braddock, Pa.	1	1	Medford, Mass.	1	
Buffalo, N. Y.	5	1	Milwaukee, Wis.	3	
Camden, N. J.	1		Mobile, Ala.	4	1
Charleston, S. C.	7	1	Morristown, N. J.	1	
Chicago, Ill.	17	2	Nashville, Tenn.	15	1
Cincinnati, Ohio.	1		New Bedford, Mass.	5	1
Cleveland, Ohio.	1	1	New Orleans, La.	3	1
Coffeyville, Kan.	1		Newton, Mass.	1	
Colorado Springs, Colo.	3		New York, N. Y.	35	4
Columbia, S. C.	4	1	Norfolk, Va.	51	
Columbus, Ohio.	18	2	Northampton, Mass.	1	
Covington, Ky.	2	1	Oklahoma, Okla.	9	2
Davenport, Iowa.	1		Philadelphia, Pa.	16	3
Denver, Colo.	1		Pittsburgh, Pa.	6	
Detroit, Mich.	12	2	Pittsfield, Mass.	1	
Dubuque, Iowa.	1	1	Portland, Me.	4	
Duluth, Minn.	3		Portland, Oreg.	2	
Elgin, Ill.	2		Portsmouth, Va.	5	
Elizabeth, N. J.	2		Providence, R. I.	3	
El Paso, Tex.	1	1	Reading, Pa.	2	
Erie, Pa.	1		Richmond, Va.	10	
Evansville, Ind.	2		Roanoke, Va.	1	
Fall River, Mass.	8		Rochester, N. Y.	1	
Flint, Mich.	2		St. Louis, Mo.	8	
Galveston, Tex.	9		Salt Lake City, Utah.	3	1
Grand Rapids, Mich.	5		San Francisco, Cal.	5	1
Hagerstown, Md.	3		San Jose, Cal.	1	
Hamilton, Ohio.	1		South Bend, Ind.	1	
Harrisburg, Pa.	1	1	Springfield, Mass.	1	
Indianapolis, Ind.	6		Stockton, Cal.	3	
Jersey City, N. J.	1		Syracuse, N. Y.	1	
Johnstown, Pa.	1		Toledo, Ohio.	6	2
Kalamazoo, Mich.	1		Troy, N. Y.	1	2
Kansas City, Mo.	4		Washington, D. C.	6	2
Lawrence, Mass.	1		Watertown, N. Y.	2	
Lexington, Ky.	4		Wheeling, W. Va.	1	1
Little Rock, Ark.	1		Wichita, Kans.	2	
Long Beach, Cal.	3		Wilmington, Del.	1	1
Lorain, Ohio.	1		Wilmington, N. C.	4	

TYPHUS FEVER.

Arizona—Bisbee.

The health officer of Bisbee, Ariz., reported by telegraph August 8, 1916, that 2 cases of typhus fever had occurred in Bisbee.

Texas—Galveston.

Surg. Bahrenburg reported by telegraph August 5, 1916, that 1 new case of typhus fever was reported in Galveston, Tex., during the week ended August 4.

City Reports for Week Ended July 22, 1916.

During the week ended July 22, 1916, two cases of typhus fever were reported by cities—one case at El Paso, Tex., and one case at New York, N. Y.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City Reports for Week Ended July 22, 1916.

City.	Population as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	584,605	184	4		30		8		58	14
Boston, Mass.	745,139	189	47	1	136	1	15		58	16
Chicago, Ill.	2,447,045	604	87	11	92	1	57	1	220	57
Cleveland, Ohio.	656,975	213	18	1	25	3	3		56	20
Detroit, Mich.	554,717		46	4	5		25	1	26	17
New York, N. Y.	5,468,190	1,439	203	22	407	17	41	2	329	137
Philadelphia, Pa.	1,683,664	448	31	6	72	3	11		160	42
Pittsburgh, Pa.	571,984	168	5		67	1	7		18	13
St. Louis, Mo.	745,988	245	24		38	1	11		33	14
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	461,335	109	10		14		7	1	30	11
Cincinnati, Ohio.	406,706	118	11	1	2	1	4		20	20
Jersey City, N. J.	300,133	66	7	1	15		4		17	4
Los Angeles, Cal.	465,367	81	4		26		2	1	31	8
Milwaukee, Wis.	428,062		6		15		21		20	5
New Orleans, La.	366,484	106	3		25				35	22
San Francisco, Cal.	416,912	125	11	4	3		8	1	11	21
Washington, D. C.	358,679	121	3		68		3		19	9
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio.	203,722	61			16		1		10	5
Denver, Colo.	253,161				25					
Indianapolis, Ind.	265,578		6		45	3		8		3
Kansas City, Mo.	289,879	67	4	2	6		9	1	6	3
Portland, Oreg.	272,833	27	3		5		5		3	11
Providence, R. I.	250,025	53	5	1	3		7		3	4
Rochester, N. Y.	250,747	80	3		39	2		11		4
From 100,000 to 200,000 inhabitants:										
Albany, N. Y.	103,580				8		1		7	
Birmingham, Ala.	174,108	57	1				1		5	2
Bridgeport, Conn.	118,434	41	2		6				6	
Cambridge, Mass.	111,669	7	7		8				2	5
Camden, N. J.	104,349	2	2				1		3	
Fall River, Mass.	126,904	30	2		4		1		14	1
Grand Rapids, Mich.	125,759	28	1		7				4	
Hartford, Conn.	108,969	41	5				1			3
Lowell, Mass.	112,124	38	2	1					2	3
Lynn, Mass.	100,316	24	3		50				3	5
Nashville, Tenn.	115,978	44	1		7		1		4	1
New Bedford, Mass.	114,094	27			3		2		10	1
New Haven, Conn.	147,095				11		1	1	10	2
Omaha, Nebr.	135,455	42			1		1	1		
Reading, Pa.	105,094	30	1		3		1	1	1	
Richmond, Va.	154,674	59	2		15		3			5
Salt Lake City, Utah.	113,567	19	12	1	66		7		2	
Springfield, Mass.	103,216	22	1		9		8		5	2
Syracuse, N. Y.	152,534	33	8		20		1		6	1
Tacoma, Wash.	108,094	17			7					
Toledo, Ohio.	187,840	77	3	1	2	1	13	1		12
Trenton, N. J.	109,212	38	2	1					11	2
Worcester, Mass.	160,523	54	4	1	13	1			10	4
From 50,000 to 100,000 inhabitants:										
Atlantic City, N. J.	55,806		1		2		1		3	
Bayonne, N. J.	67,582		4		3					
Berkeley, Cal.	54,879	13			1		3		1	2
Binghamton, N. Y.	53,082	19	2		29					2
Brockton, Mass.	65,746	13	10		3				3	
Canton, Ohio.	59,139	16	1		1					1
Charleston, S. C.	60,427	44								8
Chattanooga, Tenn.	58,576	17					1		1	2
Covington, Ky.	56,520	23	1		2				2	2
Duluth, Minn.	91,913				1		2		5	
Elizabeth, N. J.	84,550	21	1		2		2		2	4
El Paso, Tex.	51,936	34	1				1	1		5
Erie, Pa.	73,798				4		2		6	20
Evansville, Ind.	72,125	29	1	1			1		1	4
Flint, Mich.	52,159	16	1	1	1				2	2
Harrisburg, Pa.	70,754	28	3		8				6	4

* Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 22, 1916—Continued.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabit- ants—Continued:										
Hoboken, N. J.	76,104	22	2		10		1		3	2
Johnstown, Pa.	66,585		1				2		2	
Lancaster, Pa.	50,269		3		17				2	
Lawrence, Mass.	98,197	20			2		1		3	
Little Rock, Ark.	55,158	16			1					
Malden, Mass.	50,067	11			13		1		1	
Manchester, N. H.	76,959	30			1					
Mobile, Ala.	56,536	17							1	1
New Britain, Conn.	52,203								1	1
Norfolk, Va.	88,076	32							6	6
Oklahoma, Okla.	88,158	20			14		3		1	1
Passaic, N. J.	69,010	16	1		1				2	
Pawtucket, R. I.	58,156	18	3	1						1
Portland, Me.	63,014		2		1					1
Rockford, Ill.	53,761				1		1			
Sacramento, Cal.	64,806	23	1						2	2
Saginaw, Mich.	54,815	13		1	1					
St. Joseph, Mo.	83,974	9							4	1
San Diego, Cal.	51,115	16	6		1				2	2
Schenectady, N. Y.	95,265	19			8		3		2	2
Sioux City, Iowa.	55,588			1						
Somerville, Mass.	85,460	10	1		7				6	1
South Bend, Ind.	67,030	10	2		3					2
Springfield, Ill.	59,468	17								3
Springfield, Ohio.	50,804	15			3				1	1
Troy, N. Y.	77,738				5		1		2	1
Wichita, Kans.	67,847		3		1				1	1
Wilkes-Barre, Pa.	75,218	20	2		1				4	
Wilmington, Del.	93,161				2				6	6
York, Pa.	50,543		1		2				2	
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,031	7	2		1					1
Austin, Tex.	34,016	8	1							2
Bellingham, Wash.	31,609	1								
Brookline, Mass.	31,934	5								1
Butler, Pa.	26,587	4			1					
Butte, Mont.	42,918	30					1		2	6
Chelsea, Mass.	32,452	13	2	1	1		1		3	2
Chicopee, Mass.	28,688	6			7					
Colorado Springs, Colo.	32,344	9					3		14	2
Columbia, S. C.	34,058	14								
Cumberland, Md.	25,564	3	1				2			
Danville, Ill.	31,554	11								1
Davenport, Iowa.	47,127						4			
Dubuque, Iowa.	39,650		1							
East Orange, N. J.	41,155	5			9				4	1
Elgin, Ill.	27,844	3			2				2	
Everett, Mass.	38,307		2						5	3
Everett, Wash.	33,767	4			1				1	
Fitchburg, Mass.	41,144	11	5		37				4	3
Galveston, Tex.	41,076	12	1						4	3
Hagerstown, Md.	25,233		1		8					
Hamilton, Ohio.	39,655	7							2	
Haverhill, Mass.	47,774		2		2				2	1
Jackson, Mich.	34,730	5			27					
Kalamazoo, Mich.	47,361	20	1		2				7	
Kenosha, Wis.	30,319	5			5					
Knoxville, Tenn.	38,300								4	3
La Crosse, Wis.	31,522	12	2							1
Lexington, Ky.	39,703	16					1		10	3
Lincoln, Nebr.	46,028	11			2				3	1
Long Beach, Cal.	26,012	11								
Lorain, Ohio.	35,662		3							
Lynchburg, Va.	32,385	10			3				1	
McKeesport, Pa.	46,743	18								1
Medford, Mass.	25,737	9								1
Montclair, N. J.	25,550	6							2	1
Newburgh, N. Y.	29,313		1		10				1	2
Newport, Ky.	31,722	6								
Newport, R. I.	29,631	3	1		2					

¹ Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 22, 1916—Continued.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Newton, Mass.	43,085	10	1		6				1	
Niagara Falls, N. Y.	36,240	12			7				2	2
Norristown, Pa.	30,833	7								
Ogden, Utah.	30,466				3					
Orange, N. J.	32,524	12	2						3	1
Pasadena, Cal.	43,859	8							4	
Perth Amboy, N. J.	39,725		3		4				2	
Pittsfield, Mass.	37,580	11	2	2						
Portsmouth, Va.	38,610	9			1					1
Quincy, Ill.	36,761	11								2
Quincy, Mass.	37,251	8								
Racine, Wis.	45,507	6	1							
Roanoke, Va.	41,929	15	1		7					1
Rock Island, Ill.	27,961	3	1		1					
San Jose, Cal.	37,994	11	1							1
Steubenville, Ohio.	26,631	8	1							
Stockton, Cal.	34,508	6	1				1			
Superior, Wis.	45,285	6				1	2			
Taunton, Mass.	35,957	12			1					
Watertown, N. Y.	29,384	1	1		10				2	1
West Hoboken, N. J.	41,893	9			3				3	2
Wheeling, W. Va.	43,097	15							2	1
Williamsport, Pa.	33,495		4		2		3		1	
Wilmington, N. C.	28,264	7	1							1
Zanesville, Ohio.	30,406	11								1
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.	14,979	10			1					
Cairo, Ill.	15,593	8			2					1
Clinton, Mass.	¹ 13,075	2								
Concord, N. H.	22,480	6			8					
Galesburg, Ill.	23,923	9			8					
Harrison, N. J.	16,555				6				1	
Kearny, N. J.	22,753	5			3				1	
Kokomo, Ind.	20,312	8	2		3					
Long Branch, N. J.	15,057								3	
Marinette, Wis.	¹ 14,610				7					
Melrose, Mass.	17,166	4	1							
Morristown, N. J.	13,158	3			6					
Nanticoke, Pa.	22,441	5							1	
Newburyport, Mass.	15,195	5			2					
New London, Conn.	20,771	8			4					
North Adams, Mass.	¹ 22,019	9			20		2		1	
Northampton, Mass.	19,846	4			6					1
Plainfield, N. J.	23,280	7					1		4	1
Rutland, Vt.	14,624	4			7					
Sandusky, Ohio.	20,160				22				1	
Saratoga Springs, N. Y.	12,842	4								
Steelton, Pa.	15,337	6			2					
Wilkinsburg, Pa.	22,361	8								
Woburn, Mass.	15,862	2								

¹ Population Apr. 15, 1910; no estimate made.

FOREIGN.

CHOLERA ON VESSEL.

Steamship "Hawaii Maru" at Yokohama.

The occurrence of 44 cases of cholera on the steamship *Hawaii Maru*, which arrived July 29, 1916, at Yokohama, Japan, has been reported. The disease was stated to be confined to the ship and quarantine hospital. The *Hawaii Maru* left Hongkong July 12, 1916, arriving at Manila July 14, at Taipeh, island of Formosa, July 17, and Yokohama July 29, 1916.

CHILE.

Destruction of Rats—Antofagasta.

During the week ended June 24, 1916, 1,903 rats were destroyed at Antofagasta.

CHINA.

Plague Rats—Hongkong.

During the week ended June 17, 1916, out of 2,130 rats examined at Hongkong, 2 were found plague infected.

Examination of Rats—Shanghai.

During the week ended July 8, 1916,¹ 376 rats were examined at Shanghai. No plague infection was found. No examinations were reported for week ended July 1, 1916.

The finding of the last plague-infected rat at Shanghai was reported for the week ended May 6, 1916.

CUBA.

Communicable Diseases—Habana.

Communicable diseases were notified at Habana during the 10-day period ended July 10, 1916, as follows:

Disease.	New cases.	Deaths.	Remain- ing under treatment July 10, 1916.
Diphtheria.....	2	.....	1
Leprosy.....	.....	1	244
Malaria.....	3	2	1
Measles.....	28	1	19
Paratyphoid fever.....	1	.....	6
Typhoid fever.....	17	3	61
Varicella.....	.....	.....	3

¹ Report for week ended June 24, 1916, erroneously stated as for June 17, Public Health Reports, Aug. 4, 1916, p. 2106.

² From Interior of Republic.

ECUADOR.

Plague—Yellow Fever.

During the month of June, 1916, plague and yellow fever were reported in Guayaquil and vicinity as follows:

Plague.—Daule, 4 cases; Guayaquil, 7 cases.

Yellow fever.—Babahoyo, 2 cases; Guayaquil, 55 cases; Milagro, 1 case.

EGYPT.

Plague—Summary, January–June, 1916.

During the period from January 1 to June 29, 1916, 1,634 cases of plague were notified in Egypt. Of these, 38 occurred in Alexandria, 22 in Port Said, and 1 case in Suez. The remaining cases were distributed in 11 provinces, the greatest prevalence having occurred in the province of Fayoum, where 707 cases were notified.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During Week Ended Aug. 11, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	May 28–June 10...		19	From the port.
India:				
Bassein.....	June 4–10.....		2	
Calcutta.....	do.....		35	
Pegu.....	do.....		1	
Rangoon.....	June 4–17.....	7	4	
Indo-China:				
Saigon.....	June 12–18.....	19	11	
Japan:				
Yokohama.....	July 29.....	44	6	On s. s. Hawaii Maru from Hongkong and port's.
Philippine Islands:				
Manila.....	June 11–July 1....	16	12	In addition, 5 cases not previously reported.
Provinces.....				June 10–July 8, 1916: Cases, 358 deaths, 213.
Albay.....	July 2–8.....	15	8	
Bataan.....	do.....	2	2	
Bulacan.....	June 18–July 8....	70	36	
Cagayan.....	June 24–July 8....	4	1	
Camarines.....	June 18–July 8....	120	74	
Cavite.....	June 11–July 8....	17	13	
Laguna.....	do.....	19	14	
Rizal.....	do.....	17	8	
Romblon.....	June 25–July 8....	83	49	
Tayabas.....	June 11–24.....	11	8	
Siam:				
Bangkok.....	May 28–June 17...	3	3	

PLAGUE.

Ceylon:			
Colombo.....	May 28–June 17...	21	20
Ecuador:			
Daule.....	June 1–30.....	4	2
Guayaquil.....	do.....	7	1

¹ From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received During Week Ended Aug. 11, 1916—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India.....				June 4-10, 1916: Cases, 409; deaths, 331.
Bassein.....	June 4-10.....		15	
Bombay.....	June 18-24.....	25	22	
Calcutta.....	June 4-10.....		1	
Madras Presidency.....	June 18-24.....	47	29	
Moulmein.....	June 4-10.....		9	
Rangoon.....	June 4-17.....	202	189	
Indo-China:				
Saigon.....	June 12-18.....	6	4	
Siam:				
Bangkok.....	May 27-June 17...	18	17	

SMALLPOX.

Australia:				
New South Wales—				
Guildford.....	June 9-22.....	2		
Tamsworth.....	do.....	1		
Brazil:				
Para.....	July 2-8.....		4	
Canada:				
Ontario—				
Toronto.....	July 23-29.....	1		
Ceylon:				
Colombo.....	May 28-June 3....	2		From the port.
China:				
Chungking.....	June 11-24.....			Present.
Dairen.....	June 25-July 1....	1	1	
Hongkong.....	June 18-24.....	6	5	
Nanking.....	June 25-July 8....			Do.
Tientsin.....	June 18-24.....	3		
Germany:				
Königsberg.....	July 2-8.....	3		
India:				
Bombay.....	June 18-24.....	10	6	
Madras.....	do.....	16	4	
Rangoon.....	June 4-17.....	120	51	
Mexico:				
Aguascalientes.....	July 18-23.....		9	
Vera Cruz.....	July 10-16.....		1	
Union of South Africa:				
Johannesburg.....	May 28-June 3....	1		

TYPHUS FEVER.

China:				
Antung.....	June 26-July 2....		1	
Great Britain:				
Glasgow.....	July 9-15.....		3	
Japan:				
Tokyo.....	June 9-July 2....	45		Jan. 1-July 2, 1916: 462.
Mexico:				
Aguascalientes.....	July 18-23.....		9	
Russia:				
Petrograd.....	May 28-June 10...	6		
Sweden:				
Stockholm.....	June 21-27.....	1		
Turkey in Asia:				
Jaffa.....	Mar. 26-Apr. 1....			Present.

YELLOW FEVER.

Ecuador:				
Babahoyo.....	June 1-30.....	2		
Guayaquil.....	do.....	55	34	
Milagro.....	do.....	1	1	
Mexico:				
Merida.....	July 20-22.....	5		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to Aug. 4, 1916.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Mar. 12-May 6, 1916: Cases, 425; deaths, 155.
Austria.....	Mar. 26-Apr. 8.....	2		
Bosnia-Herzegovina.....	Mar. 12-Apr. 29.....	397	147	
Hungary.....	Mar. 20-Apr. 2.....	2		
Ceylon:				
Colombo.....	May 7-20.....	43	5	From s. s. Hong-Kengh from Haifong. Total to June 1: Cases, 61; deaths, 37.
Egypt:				
Suez.....	May 18-20.....	5	2	
Tor, quarantine station.....	May 22-June 3.....	112	42	
India:				
Bassein.....	Apr. 23-29.....		1	
Bombay.....	May 14-June 17.....	19	9	
Calcutta.....	May 7-27.....		135	
Benazada.....	Apr. 23-June 3.....		5	
Rangoon.....	May 21-27.....	1	1	
Indo-China.....				Dec. 1-31, 1915: Cases, 510; deaths, 395. Jan. 1-Feb. 29, 1916: Cases, 1,332; deaths, 762.
Provinces:				
Anam.....	Dec. 1-31.....	493	388	
Do.....	Jan. 1-Feb. 29.....	1,295	738	
Cambodia.....	.....do.....	11	10	
Cochin China.....	.....do.....	6	1	
Tonkin.....	Dec. 1-31.....	17	7	
Do.....	Jan. 1-Feb. 20.....	20	13	
Saigon.....	May 1-June 11.....	91	17	
Java.....				East Java, Apr. 8-May 19, 1916: Cases, 7; deaths, 4. West Java, Apr. 3-May 24, 1916: Cases, 58; deaths, 51.
Batavia.....	Apr. 13-May 24.....	35	76	
Malang.....	Apr. 8-14.....	2	2	
Malang and Djombang.....	Apr. 28-May 5.....	2	2	
Surabaya residency.....	May 6-19.....	5	2	Including Malang, 2 cases, and Sidoarjo and Malang, 3 cases with 2 deaths.
Persia:				
Asterabad.....	June 10.....			Present with 4 or 5 deaths daily.
Foumen.....	May 9.....	3	2	Previously erroneously included in cases at Reht.
Ghazian.....	June 13.....	2	1	
Mohammerah.....	June 12.....			Present.
Philippine Islands:				
Manila.....	May 14-June 3.....	20	13	Not previously reported: Cases 3; deaths, 1.
Provinces.....				May 1-June 17, 1916: Cases, 49; deaths, 32.
Laguna.....	May 21-June 10.....	14	7	
Lanao.....	May 28-June 3.....	110	88	
Mindoro.....	May 21-27.....	7	7	
Rizal.....	May 21-June 10.....	6	5	
Siam:				
Bangkok.....	May 15-27.....	4	4	
Straits Settlements:				
Singapore.....	May 27-June 3.....	1	1	
Turkey:				
Constantinople.....	June 14.....			Present among soldiers.
Smyrna.....	To June 14.....			Epidemic. Estimated number cases daily, 50.
At sea:				
Steamship Hong-Kheng.....	Apr. 27-May 9.....	17	14	En route from Haifong, Indo-China, to Colombo.
Steamship Pei-ho.....	Apr. 19-30.....	1	1	From Saigon, Indo-China, for Marseille.
Do.....	May 5-17.....	8	8	From Colombo for Suez.

PLAGUE.

Ceylon:				
Colombo.....	Apr. 30-May 6.....	3	3	
Chille:				
Mejillones.....	May 28-June 3.....	1		
Antofagasta.....	June 4-10.....	1		
China:				
Hongkong.....	May 28-June 17.....	6	6	
Ecuador:				
Ambato.....	May 1-31.....			Epidemic.
Bahia.....	do.....			Country district, vicinity of
Guyaquil.....	do.....	3	2	Bahia.
Manta.....	do.....			Country district, vicinity of
				Manta.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to Aug. 4, 1916—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt				Jan. 1-June 29, 1916: Cases, 1,634; deaths, 792.
Alexandria.....	May 26-June 28.....	27	17	
Port Said.....	May 28-June 28.....	8	5	
Provinces—				
Assiout.....	May 27-June 29.....	9	8	
Beni-Souef.....	May 26-June 25.....	34	15	
Fayoum.....	May 26-June 28.....	111	45	
Galloubeh.....	June 7.....	1	1	
Girgeh.....	June 9-21.....	3	1	
Menoufieh.....	June 12-29.....	8	4	
Minieh.....	May 29-June 29.....	35	13	
India				May 7-June 3, 1916: Cases, 1,947; deaths, 1,191. ¹
Bassein.....	Apr. 23-June 3.....	148	148	
Bombay.....	May 14-June 17.....	243	216	
Calcutta.....	May 7-June 3.....	9	9	
Henzada.....	Apr. 23-May 20.....	6	6	
Karachi.....	May 14-June 17.....	70	61	
Madras Presidency.....	.....do.....	92	65	
Mandalay.....	May 14-June 3.....	1	1	
Moulmein.....	Apr. 23-May 20.....	28	28	
Prome.....	.....do.....	1	1	
Rangoon.....	Apr. 23-June 3.....	190	179	Apr. 16-22, 1916: Cases, 51; deaths, 52.
Indo-China				Dec. 1-31, 1915: Cases, 90; deaths, 205; Jan. 1-Feb. 29, 1916: Cases, 205; deaths, 153.
Provinces—				
Anam.....	Dec. 1-31.....	36	20	
Do.....	Jan. 1-Feb. 29.....	79	62	
Cambodia.....	Dec. 1-31.....	27	36	
Do.....	Jan. 1-Feb. 29.....	77	71	
Cochin China.....	Dec. 1-31.....	4	1	
Do.....	Jan. 1-Feb. 29.....	49	20	
Tonkin.....	Dec. 1-31.....	23	23	
Saigon.....	May 15-June 11.....	39	20	
Java				East Java, Apr. 9-15, 1916: Cases, 33; deaths, 32.
Residences—				
Kediri.....	Apr. 9-May 19.....	18	18	
Paseroean.....	.....do.....	7	6	
Surabaya.....	.....do.....	23	21	Including Surabaya city and district.
Surakarta.....	.....do.....	15	24	
Mauritius.....	Apr. 15.....	5	8	
Persia				
Recht.....	May 2-19.....	20	14	
Siam				
Bangkok.....	Apr. 30-May 30.....	32	28	
Straits Settlements				
Singapore.....	Apr. 30-May 20.....	3	1	
Union of South Africa				
Orange Free State.....	Jan. 23-Mar. 26.....	36	23	Remaining under treatment Mar. 26, 6 cases.

SMALLPOX.

Australia:				
New South Wales—				
Narrabri.....	May 26-June 7.....	8	.....
Austria-Hungary:				Feb. 13-19, 1916: Cases, 1,536.
Austria.....				
Vienna.....	May 27-June 10.....	3	1	
Hungary—				
Budapest.....	May 21-June 17.....	30	14	
Brazil:				
Rio de Janeiro.....	Apr. 9-June 17.....	94	18	
Santos.....	May 8-14.....	.....	1	
Canada:				
Ontario—				
Fort William and Port Arthur.....	July 9-15.....	1	.....
Niagara Falls.....	July 2-8.....	1	.....
Toronto.....	June 25-July 1.....	2	.....
Ceylon:				
Colombo.....	May 7-20.....	2	.....

¹ Reports for weeks ended May 20 and May 27, 1916, not received.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to Aug. 4, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	May 22-June 18...	2	1	
Dairen.....	May 21-27.....	1		
Chungking.....	May 7-June 10.....			Present.
Foochow.....	May 7-27.....			Do.
Harbin.....	May 2-14.....	2	1	
Hongkong.....	May 7-June 17.....	62	45	
Nanking.....	June 11-17.....			Do.
Tientsin.....	May 14-June 17.....	40	10	
East Africa:				
Mombasa.....	Apr. 24-30.....	3	1	
Egypt:				
Alexandria.....	May 28-June 17.....	4	2	
Cairo.....	Jan. 22-Feb. 11...	6	1	
France:				
Paris.....	May 14-June 3....	6		
Germany:				
Breslau.....	May 21-27.....	1		
Hamburg.....	June 11-17.....	1		
Great Britain:				
Cardiff.....	June 4-17.....	1	1	
London.....	do.....	1		
Greece:				
Athens.....	Apr. 1-June 13....	178	37	
India:				
Bassein.....	May 7-June 10.....		2	
Bombay.....	May 14-June 10....	129	62	
Calcutta.....	May 7-June 3.....		3	
Madras.....	May 14-June 17....	91	33	
Rangoon.....	Apr. 23-May 27....	128	39	
Indo-China:				Dec. 1-31, 1915: Cases, 74; deaths, 14. Jan. 1-Feb. 29, 1916: Cases, 134; deaths, 16.
Provinces—				
Anam.....	Dec. 1-31.....	48		
Do.....	Jan. 1-Feb. 29....	24		
Cambodia.....	Dec. 1-31.....	19	13	
Do.....	Jan. 1-Feb. 29....	37	14	
Cochin China.....	Dec. 1-31.....	1	1	
Do.....	Feb. 1-29.....	10		
Tonkin.....	Dec. 1-31.....	6		
Do.....	Jan. 1-Feb. 29....	63	2	
Japan:				
Kobe.....	May 29-June 25....	24	4	
Nagasaki.....	June 26-July 2....	1	1	
Java:				East Java, Apr. 8-May 19: Cases, 13; deaths, 8. Mid-Java, Apr. 1-May 12, 1916: Cases, 143; deaths, 18. West Java, Apr. 13-May 24, 1916: Cases, 109; deaths, 27.
Batavia.....	Apr. 13-May 24....	7	5	
Blora and Malang.....	May 13-19.....	4	1	
Kraksan and Soemenap.....	May 6-12.....	2		
Sittoebondo.....	Apr. 8-14.....	1	1	
Surabaya.....	May 6-19.....	2	1	
Toeban and Bosjonegoro.....	Apr. 8-14.....	6	6	
Mexico:				
Aguascalientes.....	June 12-July 16....		41	
Frontera.....	May 28-June 10....	4	1	
Guadalajara.....	June 11-17.....	35	9	
Mazatlan.....	May 31-June 6.....		4	
Tenosique.....	June 14.....			175 miles south of Frontera. Epi- demic among troops.
Vera Cruz.....	June 4-July 9.....	5	10	
Netherlands:				
Amsterdam.....	May 28-June 3....	1		
Philippine Islands:				
Manila.....	do.....	1		
Porto Rico:				June 19-25, 1916: Cases, 33.
Aguas Buenas.....	June 19-25.....	5		
Arecibo.....	do.....	2		
Bayamon.....	June 19-July 2....	2		
Naranjito.....	June 26-July 2....	4		
Rio Piedras.....	do.....	1		
San Juan.....	do.....	24		
Toa Alta.....	do.....	12		
Portugal:				
Lisbon.....	May 21-July 1....	15		
Russia:				
Moscow.....	Apr. 30-June 16....	208	52	
Riga.....	Apr. 6-12.....	1		
Petrograd.....	Apr. 23-May 27....	125	27	
Siam:				
Bangkok.....	May 24-30.....	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to Aug. 4, 1916—Continued.

SMALLPOX—Continued.

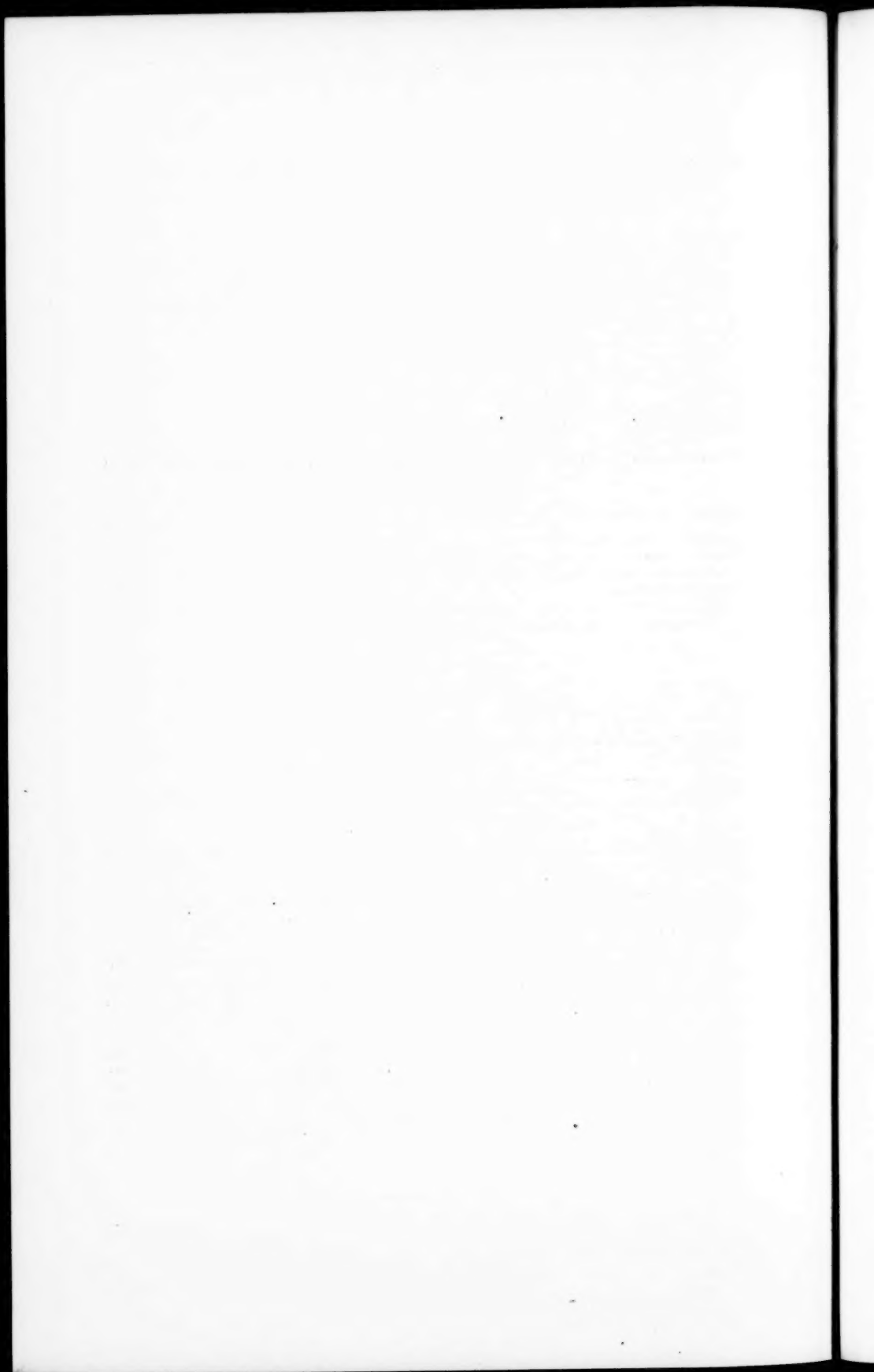
Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Madrid.....	May 1-31.....		13	
Valencia.....	May 21-July 1.....	12	4	
Straits Settlements:				
Penang.....	May 14-20.....	3		
Singapore.....	Apr. 30-May 27.....	4	3	
Switzerland:				
Basel.....	May 13-June 17.....	25		
At sea:				
Steamship Katuna.....				Case of smallpox landed at Colombo, Ceylon, May 12, 1916. Vessel arrived May 27 at Fremantle, Australia, was ordered into quarantine, and proceeded to Melbourne direct for disinfection.

TYPHUS FEVER.

Austria-Hungary:				
Austria.....				Feb. 13-26, 1916: Cases, 845.
Hungary.....				Feb. 21-Mar. 5, 1916: Cases, 35; deaths, 7.
Budapest.....	May 21-June 17.....	13	2	
Canada:				
New Brunswick—				
St. John.....	July 29.....	4		
China:				
Antung.....	June 19-25.....	1		
Harbin.....	May 2-8.....	1		
Tientsin.....	May 14-20.....		1	
Egypt:				
Alexandria.....	May 21-June 17.....	197	83	
Cairo.....	Jan. 8-Feb. 11.....	41	21	
Germany:				
Bremen.....	June 18-24.....	1		
Chemnitz.....	May 28-June 3.....		1	
Frankfort-on-Main.....	June 11-17.....		1	
Hanover.....	May 7-20.....	4		
Königsberg.....	June 4-10.....	1		
Leipzig.....	do.....		1	
Greece:				
Saloniki.....	May 1-June 11.....		18	
Japan:				
Tokyo.....	May 22-June 8.....	65		Jan. 1-June 8, 1916: Cases, 417.
Java:				East Java, Apr. 8-May 24, 1916: Cases, 20; deaths, 9. Mid-Java, Apr. 1-28, 1916: Cases, 30; deaths, 6. West Java, Apr. 13-May 17, 1916: Cases, 53; deaths, 13.
Batavia.....	Apr. 13-May 17.....	32	10	
Samarang.....	Apr. 1-28.....	8	4	
Surabaya.....	Apr. 8-May 12.....	6	6	
Mexico:				
Aguaascalientes.....	June 12-July 16.....		51	
Guadalajara.....	June 11-17.....	4	1	
Vera Cruz.....	June 4-9.....		2	
Russia:				
Moscow.....	Apr. 30-June 17.....	867	47	
Petrograd.....	Apr. 23-May 27.....	16	5	
Switzerland:				
Geneva.....	May 21-27.....	1		
Turkey in Asia:				
Adana.....	May 13.....			Present.
Haifa.....	Apr. 24-30.....	5	1	
Jaffa.....	Apr. 23-29.....			Mar. 19-25, 1916: Present.
Mersina.....	May 7-13.....	5		Apr. 2-8, 1916: Cases, 3.
Tarsus.....	May 13.....			Present.

YELLOW FEVER.

Ecuador:				
Guayaquil.....	May 1-31.....	21	17	
Mexico:				
Merida.....	July 19-22.....	8		



SANITARY LEGISLATION.

COURT DECISIONS.

KENTUCKY COURT OF APPEALS.

Vaccination—An Order of a Local Board of Health Requiring Vaccination of School Children Upheld.

TRUSTEES OF HIGHLAND PARK SCHOOL DISTRICT *v.* McMURTRY. (Apr. 13, 1916.)

In Kentucky the State board of health and the local boards of health are both charged, independently, with the preservation of the public health, and they have power to take such action as in the exercise of a reasonable discretion may be deemed necessary to suppress and prevent the spread of any infectious or contagious diseases.

Under the laws of Kentucky, when a smallpox epidemic is threatened, it is within the power of a local board of health to require all children attending school to be vaccinated.

[184 Southwestern Reporter, 390.]

CARROLL, J. This suit was brought by the board of trustees of the Highland Park graded common school district against the members of the county board of health of Jefferson County and Dr. Whittenburg, the county health officer, for the purpose of enjoining them from enforcing an order directing vaccination by a day named in the order of all school children attending the graded school in question who had not been vaccinated within seven years preceding the issuance of the order. After the issues had been made up, the case was submitted on the evidence and an agreed state of facts and the petition dismissed.

Section 2049 of the Kentucky Statutes, which is a part of the chapter devoted to the powers and duties of the State board of health, provides, in part, that:

The board shall have general supervision of the health of the citizens of this State; * * * and are further empowered to make and enforce rules and regulations to obstruct and prevent the introduction or spread of infectious or contagious diseases to or within the State.

In section 2055 provision is made for the appointment of local boards of health for the respective counties in which they reside, and these county boards "are authorized and shall have power to enforce the rules and regulations adopted by the State board of health." It further provides that:

Such local boards are empowered and it shall be their duty to inaugurate and execute and to require the heads of families and other persons to execute such sanitary regulations as the local board may consider expedient to prevent the outbreak and spread of cholera, smallpox, yellow fever, scarlet fever, diphtheria, and other epidemic and communicable diseases, and to this end may bring the infected population under prompt and proper treatment during premonitory or other stages of the disease, and they are empowered to go upon and inspect any premises which they may believe are in an unclean or infectious condition, and it shall be empowered to fix and determine the location of an eruptive hospital for the county, sufficiently remote from human habitation and public highways as in its judgment is safe.

And also directs that:

The local board shall appoint a competent practicing physician who shall be the health officer of the county and secretary of the board, whose duties shall be to see that the rules and regulations provided for in this act and the rules and regulations of the State board of health are enforced.

In the chapter on smallpox, embracing sections 4607-4618 of the statutes, further provision is made for the prevention [of the] spread of smallpox and the duty enjoined on parents, guardians, and other persons having the care, custody, or control of children to have the same vaccinated.

The graded-school district here in question is located in Jefferson County, outside the corporate limits of the city of Louisville, and Dr. Whittenburg is the health officer for Jefferson County appointed by the local board of health of the county, which board in turn had been appointed by the State board of health.

It further appears that the State board of health had adopted a regulation known as rule 35, reading:

No person shall become a member of any public school within the jurisdiction of this board, as teacher or scholar, without furnishing a certificate from some reputable physician that he or she has been successfully vaccinated and has been revaccinated at least once every seven years.

On January 10, 1916, Dr. Whittenburg, in his capacity as health officer for Jefferson County, and purporting to act by order of the Jefferson County board of health, served on each of the trustees of the graded school a notice in writing, which notice, after setting out rule 35 of the State board, recited that:

Information has come to this office that the rules concerning vaccination in your school are not being carried out in accordance with the instructions of the board of health. * * * I expect each child enrolled to bring a certificate of successful vaccination, and file same with the teacher and principal in charge. You have at present an infection of smallpox in your immediate school vicinity. * * * Vaccination must follow immediately, and certificates must be on file by the 20th day of this month from all children who have not already complied with the above instructions. In case of failure, they must be sent home.

It appears, however, that Dr. Whittenburg issued this order or notice without having been expressly so directed to do by the county board or the State board of health; and the trustees of the graded school refusing to obey the instructions contained in the notice, the county board of health, on February 4, 1916, held a meeting and adopted a resolution reciting that:

It appearing that there are a number of smallpox cases in Highland Park and in the vicinity of the school-houses in district No. 46, and that an epidemic is threatened in that neighborhood; and it further appearing that the board of trustees of the Highland Park graded common school district No. 46, and the principal of the school, willfully refused to enforce rule No. 35 adopted by the State board of health; * * * now therefore it is ordered by the county board of health that the county health officer, Dr. Whittenburg, shall take all necessary steps by taking out warrants and instituting prosecutions against said parties, to the end that the vaccination laws of the State of Kentucky and the rules and regulations of the State board of health be vigorously enforced and the lives of the school children and other residents of Jefferson County be protected.

When this resolution was adopted by the county board of health, Dr. Whittenburg again notified in writing each of the school trustees to have all children attending school and not holding a certificate of successful vaccination to be sent home and not allowed to reenter without first showing a certificate of successful vaccination from some reputable physician. This notice further directed the trustees that it must be obeyed within 24 hours after its service.

Aside from the stipulation of fact, in which it was agreed that there was a county board of health in Jefferson County composed of certain named persons, and that Dr. Whittenburg was the duly appointed health officer of the county, and that rule 35 had been adopted by the State board of health, the only evidence in the case consists of the deposition of Dr. Whittenburg. In his evidence he said, in substance, that he issued the notice of January 10 under what he conceived to be his authority as health officer of the county and without having been expressly directed to do so by either the State board of health or the county board of health. That when this notice was not obeyed, the county board of health had a meeting and adopted the resolution which was served on the trustees on February 4. He further said that at the time of or before the issuance of the notice in January, there was a child in the graded common school district who was afflicted with smallpox, and that subsequently several other

cases of smallpox developed at different places on the border line of this school district, although none of the persons afflicted lived in the school district.

* * * * *

On behalf of the school trustees the argument is made that Dr. Whittenburg, in his capacity as health officer for Jefferson County, was without power or authority to demand the observance of the notice issued by him on January 10, 1916, because he had not been expressly directed by either the State board or the county board to take the action set forth in this notice, and we may first dispose of this question.

It will be noticed that under section 2055 of the statutes it is the duty of the health officer of the county "to see that the rules and regulations of the State board of health are enforced," and among the rules adopted by the State board of health was rule 35, heretofore set out, providing that no person shall become a member of any public school without furnishing a certificate that he or she has been successfully vaccinated once every seven years; and it is the contention of counsel for the local board of health that under authority of this rule and the power conferred by the statute Dr. Whittenburg, as health officer, independent of any action on the part of the local board, had power to take the action set out in the notice of January 10.

The health officer of the county is primarily the agent and executive officer of the local board, and is charged with the duty of enforcing such rules and regulations as the State board or the county board may adopt within the scope of the powers conferred upon them by the statute. But we are not prepared to say that without express authority from either the State board or the county board the health officer would have power to take the responsible action assumed to be exercised in this notice of January 10. It is quite a serious matter to order, as was done in this notice, that all of a great number of children attending a public school shall be vaccinated within a certain time or denied the privilege of attending school, and we are inclined to the view that before the health officer undertakes to demand the enforcement of a preventive regulation like this, affecting so many people, he ought to have express authority so to do from either the State or the county board.

We do not of course mean to hold that before the health officer can act in any case he must be armed with express authority from one of these boards, because many matters might come up in connection with the duties of his office that he should be permitted to perform, in the exercise of a sound discretion and within the scope of his general authority, without having the express sanction of either the State or county board.

And so we do not think it would be wise or prudent to attempt to describe in detail the things a health officer may or may not do without the express direction of one of these boards. Sufficient for the purpose of this case is it to say that in our opinion it would be investing the health officer with more authority than was contemplated by the statute if he should be given the power on his own volition to direct that all children attending one or more public schools should be promptly vaccinated or else denied the privilege of attending the school. (*Taylor v. Adair County*, 119 Ky., 374; 84 S. W., 299; 27 Ky. Law Rep., 36; *Hickman County v. Scarborough*, 150 Ky., 1; 149 S. W., 1116.)

So far, however, as the questions arising in this case are concerned, it is not important whether Dr. Whittenburg did or did not have the authority attempted to be exercised at the time he gave the notice of January 10, because subsequent to this, and after having been expressly directed by the county board so to do, he gave the notice of February 4, and we may assume that the lower court, in dismissing the petition of the school trustees, considered that they were under a duty to enforce compliance with this last notice. And as this notice was given by direct authority of the local board of health, the principal question in the case is: Did the local board have power to direct the action set forth in this notice to be taken?

Counsel for the school board insist that neither the State board nor the county board of health had authority to adopt or enforce a regulation requiring the vaccination of school children as a condition precedent to their right to attend the public schools of the State. It is further contended in this behalf that there was not an epidemic or a threatened epidemic of smallpox in the Highland Park graded school district at the time of the issuance of the order of February 4.

In disposing of these questions we will not stop to discuss the question raised that vaccination is not a safe and valuable preventive from smallpox. There may be some difference of opinion as to its efficacy, but the weight of medical authority supports the view that it is not only a safe but a valuable preventive. (*Jacobson v. Massachusetts*, 197 U. S., 11; 25 Sup. Ct., 358.)

Nor is it necessary to determine whether the action was taken under rule 35 of the State board or by the directors of the local board under the power vested in it. Each of these boards is charged independently with preserving the public health and with taking such action as in the exercise of a reasonable discretion may be deemed necessary to suppress and prevent the spread of infectious or contagious diseases. The only substantial difference in their powers, in respect to taking such measures as may be necessary to conserve the health of the people of the State, is that the State board is invested by the statute with larger power and greater jurisdiction than the local boards. But the local boards may under the statute exercise the authority conferred upon them without asking the advice or the consent of the State board. So that the adoption of rule 35 by the State board was not necessary to confer upon the local board the power attempted to be exercised, as set forth in this notice, if the conditions were such as to justify the county board in adopting this method of preventing and suppressing the spread of smallpox in the school district.

We are further of the opinion that the language of the statute is broad enough to confer on the State board and the local boards the authority to issue an order such as the one here in question when they believe there is reasonable apprehension of an epidemic of smallpox in a school district, and that the vaccination of the school children is the only means by which it can be prevented.

It is true that the precise questions as to the power of these boards to make vaccination a condition precedent to attendance upon the public schools when there is a reasonable apprehension of an outbreak of smallpox and in the judgment and discretion of the board it is necessary to require the vaccination of school children has not heretofore come before this court, but it has frequently been adjudicated by other courts, and the uniform ruling is that when there is reasonable apprehension of the outbreak of a communicable disease, such as smallpox, health boards have authority to take such action as was here directed. (*State v. Zimmerman*, 86 Minn., 353; 90 N. W., 783; *Blue v. Beach*, 155 Ind., 121; 56 N. E., 89; *Duffield v. Williamsport School District*, 162 Pa., 476; 29 Atl., 742; *Morris v. Columbus*, 102 Ga., 792; 30 S. E. 850; *State v. Hay*, 126 N. C., 999, 35 S. E., 459; *Bissell v. Davison*, 65 Conn., 183; 32 Atl., 348; *Vie-meister v. White*, 179 N. Y., 235; 72 N. E., 97; *People v. Board of Education*, 234 Ill., 422; 84 N. E., 1046.)

And although we have no direct statutory direction on this subject, a reasonable construction of the liberal powers conferred by the statute in the creation of these boards would imply a grant of authority to adopt in reference to public schools such measures as were here taken. Indeed, it would be extremely unfortunate if the legislature had limited the power of these boards in respect to dealing with situations such as this, or if the court should restrain them from taking such measures as might be by them deemed necessary to prevent an outbreak and epidemic of this disease in public schools, because there is scarcely any place where an outbreak of smallpox would spread with more rapidity or over a wider territory than if it found a starting place in one of the public schools attended by hundreds of children.

The argument is made that this construction gives to these boards great power. This is true, but necessarily so. The conditions which they were created to deal with could not be successfully met unless they had large power and discretion. In the very nature of things it would be utterly impracticable for the legislative department of the State to undertake to define the conditions that must exist before these boards could take such action as might be necessary to control situations that are constantly coming up in various forms; and so, if these agencies of the State, created for the purpose of conserving the health of the people, are to accomplish the objects for which they were created, they must needs be given authority to take such prompt and effective action, in each case as it comes up, as in the exercise of their reasonable judgment and discretion may be deemed necessary to meet the exigencies of the occasion. They are not required to wait until an epidemic actually exists before taking action. Indeed, one of the chief purposes of their existence is to adopt and enforce such timely measures as will prevent epidemics. What they shall do and how it shall be done are matters left to their sound discretion. But of course these boards can not adopt unreasonable or arbitrary rules or regulations or, without cause, harass the public or needlessly subject individuals to expense or inconvenience or act unless they have reasonable grounds to believe that the action taken is necessary to prevent or suppress the disease sought to be controlled.

And we have no doubt of the jurisdiction of the courts to restrain these boards if they should undertake to exert authority not fairly within the powers conferred by the statute or plainly not needed for the purpose of conserving or protecting the health of the people or preventing the outbreak or spread of infectious or contagious diseases. These views are fully supported by the cases of *Hengehold v. City of Covington* (108 Ky., 752; 57 S. W., 495; 22 Ky. Law Rep., 462); *Trabue v. Todd County* (125 Ky., 809; 102 S. W., 309; 31 Ky. Law Rep., 332); *Allison v. Cash* (143 Ky., 679; 137 S. W., 245); *Hickman County v. Scarborough* (150 Ky., 1; 149 S. W., 1116); *Breckenridge County v. McDonald* (154 Ky., 721; 159 S. W., 549); *Board of Health v. Kollman* (156 Ky., 351; 160 S. W., 1052 [Reprint 342 from the Public Health Reports, 90.])

Whether the State board or the local boards have authority to order vaccination of all children as a condition precedent to their attendance on school, in the absence of reasonable apprehension of an outbreak of this disease, is not before us in this case, and it is not necessary to a decision of this case that we should express an opinion on this subject.

The remaining question is: Did the facts authorize the issuance and the enforcement of the order adopted by the local board in respect to this graded school district? This may be shortly disposed of. Keeping in mind what we have said as to the power of the boards, and that the discretion lodged in them will not be interfered with unless plainly abused, it is apparent from the evidence of Dr. Whittenburg, supplemented by the action of the local board, that there was a reasonable apprehension in the minds of the board that an epidemic of smallpox might find a starting place in this school. And to prevent a calamity like this the board was authorized to take the action it did.

The judgment is affirmed.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

BUTTE, MONT.

Bread—Wrapping of, to Prevent Contamination. (Ord. 1326, June 8, 1916).

SECTION 1. It shall be unlawful for any person, firm, or corporation, or for his agent or servant, to sell, exchange, or deliver, or offer for sale, or exchange or deliver or cause or permit to be sold, exchanged, or delivered in the city of Butte any bread unless the same shall be closely wrapped and sealed in a clean paper, each loaf to be wrapped separately, said paper to be impervious to any pollution whatsoever from dust, dirt, flies, or any vermin, and from the hands of any person or persons engaged in its sale, said wrapping to be done at the plant or shop where said product is made: *Provided, however,* That the provisions of this ordinance shall not apply to hotels, restaurants, boarding houses, or other places where bread is made for their own use.

SEC. 2. The use of newspapers or any other waste paper for such wrapping is strictly prohibited. All bread must stand after it leaves such ovens two hours before it is wrapped and sealed in said paper.

SEC. 3. Each and every person, company, or corporation violating any of the provisions of this ordinance shall, upon conviction, be fined in a sum not less than \$10 nor more than \$300.

DECATUR, ILL.

Communicable Diseases—Notification of Cases—Quarantine—Placarding—Disinfection—Hospitalization—School Attendance. Tuberculosis. (Ord. 270, Apr. 10, 1916.)

ART. 6. SEC. 35. *Contagious-disease reports.*—Every physician or other person attending upon any case of contagious, infectious, or pestilential disease shall, within 12 hours after first having knowledge of the same, report by telephone every such case to the office of the superintendent of health, stating the name of the person, giving the residence location, so that he or she may be easily found, and stating the nature of the disease and such other relative information as desired. The following diseases are hereby declared to be reportable diseases: Cholera, smallpox, scarlet fever, diphtheria, infantile paralysis, measles, chicken-pox, varioloid, erysipelas, cerebrospinal meningitis, whooping cough, mumps, typhoid fever, tuberculosis, and other diseases designated, accepted, and recognized as contagious or infectious.

SEC. 36. *Quarantine.*—It shall be the duty of the superintendent of health to visit and examine, or cause to be visited and examined by a physician, all persons who shall be reported to him as laboring or supposed to be laboring under any contagious, infectious, or pestilential disease, and who have not had medical attendance. The superintendent of health shall cause a notice printed in large letters to be placed upon every house in which any person or persons are living or staying, who have been reported to be affected with any such disease, on which shall be printed the name of the disease from which the person is suffering, and if any person or persons shall

deface, alter, mutilate, destroy, remove, or tear down such notice without the permission of the superintendent of health, such person or persons shall be subject to the penalties of this article. The head of every household in which there is a contagious or infectious disease shall notify the health department at once if the card has been removed by any means whatsoever, and failure to so report shall be subject to a fine provided in this ordinance.

SEC. 37. *Removal of patients.*—The superintendent of health, with the consent of the commissioner of public health and safety, shall, when he deems it advisable, cause any person or persons within the city having any of the above-named diseases to be removed to the isolation hospital, or to some other safe and proper place where danger from contagion will be avoided, and shall provide suitable attendance for such person: *Provided*, That if such person, being a resident of the city, shall refuse to be removed, or if conditions be such that in the opinion of the attending physician removal would be attended with danger to his or her life, then such measures shall be taken by the superintendent of health as may be deemed most advisable to prevent the spread of the disease.

SEC. 38. *Exposure of person; articles from infected place.*—Any person having any contagious disease enumerated in this ordinance who shall willfully expose himself or herself in the public street, public places, conveyance, or vehicle, while in danger of conveying the disease to others, or any driver or owner of such vehicle or conveyance, who did not immediately disinfect the same under the direction of the health department, and any person who shall give, lend, sell, transmit, convey, or expose any clothing, rags, bedding, or other thing which have been exposed to infection or contagion shall be liable to the fine specified in this article.

SEC. 39. *Expiration of quarantine.*—The attending physician shall report to the health department when the patient or patients have recovered from the disease quarantined or placarded for, and the premises shall be thoroughly fumigated under the supervision of the health department and quarantine raised.

SEC. 40. *Institutions to report.*—The manager or other person in charge or control of any public or private institutions, hotel, boarding or lodging house in the city shall, within six hours after first discovering the existence of any contagious disease, report to the superintendent of health, stating the name, the nature of the disease, and the place of residence of the patient.

SEC. 41. *Tuberculosis, etc.; fumigation.*—The health department is hereby given authority to cause all houses or premises in which there has been a case or cases of tuberculosis, and in case of the vacation of any apartment or premises by death from tuberculosis, or by removal therefrom of a person or persons sick with tuberculosis, to be fumigated and disinfected. The occupant, owner, or agent of every such house or premises shall notify the health department of such removal or death, and upon the failure to do so shall be subject to the penalties of this ordinance.

SEC. 42. *Penalty.*—Any person who shall violate or fail to comply with the provisions of this article shall be subject to a fine of not less than \$5 nor more than \$100 for each and every offense.

* * * * *

ART. 2. SEC. 10. *Sanitation of schools.*—The superintendent of health shall have jurisdiction in all matters pertaining to the preservation of the health of those in attendance upon the public and private schools of the city of Decatur, to which end it is hereby made the duty of the superintendent of health: (1) To require that all persons attending said schools, either as teacher or pupil, shall present satisfactory evidence of proper and successful vaccination against smallpox whenever smallpox exists in the city, or there is reasonable ground to apprehend its appearance; (2) to exclude from said school any person suffering with a contagious or infectious disease, or liable to convey such disease while in attendance. No child or person shall attend any school in the city while suffering from, or who has recently been in contact with

any person suffering from smallpox, scarlet fever, diphtheria, measles, chicken-pox, whooping cough, mumps, yellow fever, infantile paralysis, typhoid fever, or any other contagious or infectious disease. "Suffering from a disease" shall mean possessing the symptoms or harboring the organisms of said disease, whether the person is actually ill with the disease or not. "Recently in contact" shall mean brought in contact with an environment or person infected with such a disease within such a period of time prior to the attendance at school as to make a child or any person a possible carrier of infection to others. Communicable or contagious diseases shall mean all diseases which are, according to recognized medical authorities, transmissible from one person to another. The superintendent of health is hereby authorized to make, or cause to be made, through the school department by agreement, a physical examination of all school children in the city, and for that purpose is empowered to visit any school and examine any pupils as often as he deems it necessary. The board of education, upon notification of the existence of a contagious or infectious disease among any pupils in any school, shall immediately notify the principal of the school, and the patient therefrom, or any other person exposed to the disease, shall be excluded from school until the person is furnished with a certificate of entrance signed by the attending physician and indorsed by the superintendent of health, stating that said person has entirely recovered and is not a menace to other pupils. The period of exclusion from school from contagious or infectious diseases shall be as follows:

(a) *Scarlet fever*.—In scarlet fever the minimum time is five weeks, if desquamation is complete and all purulent discharges have ceased. If isolation quarantine is observed, children and others who have had the disease may return to school. If children or others who have not had the disease are immediately removed to another address they may return to school in one week. If continuing to reside at home they must not be readmitted until five days after the latest case in the family has been discharged.

(b) *Diphtheria*.—In diphtheria the minimum time is two weeks, and cultures from the throat and nose taken on two successive days no longer show the diphtheria bacilli. Children and others in the family who have been immunized against the disease, and cultures from whose throats show no diphtheria bacilli, may return to school. If children and others are immediately removed to another address and cultures from the throat and nose are negative, they may be readmitted to school. In case of a diphtheria carrier one negative culture is sufficient.

(c) *Membranous croup*.—Membranous croup is considered the same as diphtheria.

(d) *Measles*.—Minimum time, until at least five days after the disappearance of the rash, if the patient is well in other respects, no cough, no catarrhal discharges. If quarantine is observed and children and adults who have had the disease are immediately removed to another address they may return to school in 14 days. If continuing to reside in the home they can not be readmitted until 14 days after the latest case in the family has been discharged.

(e) *German measles*.—One week. Exclude all others who have not had the disease until the case is terminated.

(f) *Chicken-pox*.—Until all scabs have disappeared, exclude all who have not had the disease until the case is terminated.

(g) *Whooping cough*.—No definite time, but until the whoop has definitely disappeared, usually six weeks to two months.

(h) *Mumps*.—Until the swelling has entirely subsided.

In all other contagious or infectious diseases the patient shall be excluded until the attending physician and the superintendent of health shall declare such patients not a menace to other pupils.

Spitting—Prohibited in Public Places. (Ord. 270, Apr. 10, 1916.)

ART. 8. SEC. 52. *Spitting.*—Spitting is hereby prohibited either on the walk or sidewalk, or upon the floor of any hall, office, hotel, apartment house, tenement or lodging house, restaurant, store, street car, or stairs of any public building, church, theater, railway station or factory. Every person owning or having the management or control of any hall or office, hotel, store, factory, theater, or other building or room which is used in common by the public, shall provide sufficient and proper receptacles conveniently placed for spitting, and shall also provide for the cleaning and disinfecting of such receptacles.

SEC. 53. *Penalty.*—Any person, firm or corporation violating any of the provisions of this article shall be subject to a fine of not less than \$1, nor more than \$5 for each and every offense.

Lodging Houses—Ventilation of. (Ord. 270, Apr. 10, 1916.)

ART. 12. SEC. 64. *Lodging houses; ventilation.*—Every house, building, or portion thereof in the city, designed to be used, occupied, leased, or rented, or which is used, occupied, leased, or rented for a lodging house shall have in every room which is occupied as a sleeping room and which does not communicate directly with the external air, a ventilating or transom window having an opening or area of 3 square feet over the door leading into and connected with the adjoining room, if such adjoining room communicates with the external air, and also a ventilating or transom window of the same opening or area communicating with the entry or hall of the house. This amount of ventilation shall be furnished to each room occupied by one and not more than three people at the same time. No room in any lodging house shall be so occupied that the allowance of air to each person living or sleeping in such room shall at any time be less than 600 cubic feet for each such person more than 12 years old, and 400 cubic feet for each such person of the age of 12 years or under.

SEC. 65. *Lodging house defined.*—A lodging house shall be taken to mean and include any house or building or portion thereof in which persons are harbored or received or lodged for hire for a single night or for less than a week at one time, or any part of which is let for any person to sleep in for any term less than a week.

Common Drinking Cups—Prohibited in Public Places. (Ord. 270, Apr. 10, 1916.)

ART. 8. SEC. 50. *Drinking cups.*—It shall be unlawful for any person, firm, or corporation, directly or indirectly connected with any public or private school, or in any city building, hall used for public meetings or entertainments, hotels, lodging houses, theaters, factories, or public parks in the city of Decatur, to use or permit for use a common drinking cup, glass, or such other utensil which has not been washed and rinsed in running water before each separate usage. It shall be the duty of every owner, agent, or manager of the above mentioned to provide sanitary equipment for the securing of water.

SEC. 51. *Penalty.*—Any person, firm, or corporation who shall violate any of the provisions of this article shall upon conviction be fined for each offense the sum of not less than \$5 nor more than \$50 for each and every offense [sic].

Meat and Meat Products—Condemnation of Unwholesome. Slaughterhouses—Sanitary Regulation. (Ord. 270, Apr. 10, 1916.)

ART. 7. SEC. 43. *Tainted meats.*—When any cattle, meat, fish, fowls, or other substance or material used for human food is found upon inspection to be tainted, diseased, or unwholesome from any cause and unfit for human food, or adulterated, or in a condition or of a quality condemned or forbidden in any ordinance of the city, the superintendent of health or any officers of the health department shall seize the same to be destroyed or disposed of.

SEC. 44. *Place of slaughtering; age and weight.*—No cattle, sheep, or swine shall be killed within the city for human food unless by special permission or special ordinance, and no cattle, sheep, or swine shall be sold for food that are in a diseased condition, overheated, or feverish. No calf or any part thereof which shall be less than 4 weeks old and less than 125 pounds live weight, no pig or any part thereof which shall be less than 6 weeks old, and no lamb or any part thereof which shall be less than 8 weeks old shall be killed for human food or shall be kept or offered for sale.

SEC. 45. *Slaughterhouse; sanitary requirements.*—Every owner, lessee, or occupier of a slaughterhouse in which shall be killed any cattle, swine, sheep, or any other kind of animals, shall cover every part of the floor or pavement of such slaughterhouse with cement or other impervious material, properly sloped to well-trapped and permanently grated inlet having a direct communication with a sewer. The walls thereof shall be covered to a height of 7 feet with some smooth impervious material, and the yards, apartments, and pens connected therewith shall be paved with brick, cement, or some impervious material, and shall be well and adequately lighted.

SEC. 46. *Water supply, ventilation, etc.*—Every slaughterhouse shall be supplied with an adequate water supply and such an arrangement of hose or pipes, as will enable the walls, floors, and yards to be effectively washed. Every slaughterhouse shall be properly lighted and ventilated, and to the satisfaction of the health department. Every slaughterhouse shall be kept in such condition and manner as not to be offensive to those in the near vicinity, and all refuse matter produced by such slaughtering shall be removed from the premises daily.

SEC. 47. *Diseases.*—Persons affected with tuberculosis or any other infectious or communicable disease shall not be employed in any department of such an establishment where carcasses are dressed, handled, or meat products prepared. An employee suspected of being so affected shall be reported by the superintendent of health to the manager of the establishment and to the commissioner of health.

SEC. 48. *Transportation of meat; garments.*—The aprons or other outer garments of employees who handle meat in contact with such clothing shall be of a material that can be readily cleaned and made sanitary. All persons handling meat continually, or delivering meat from one place to another, shall be provided with an outer garment made especially for this purpose. No meat shall be transported from one part of the city to another, or from one establishment to another, without first being covered with some material which shall exclude flies, filth, and dirt.

SEC. 49. *Penalty.*—Any person, firm, or corporation, who shall fail to comply with the provisions of this article, shall upon conviction be fined not less than \$5 nor more than \$100 for each and every offense.

Bakeries—Sanitary Regulation—Employees. (Ord. 270, Apr. 10, 1916.)

ART. 3. SEC. 15. *Bakeries defined.*—Any place used for the purpose of mixing, compounding, or baking, for sale or for purpose of a restaurant or hotel, any bread, biscuits, crackers, buns, cakes, pies, or any other food products of which flour or meal is the principle ingredient, shall be deemed a bakery for the purpose of this regulation.

SEC. 16. *Sanitary requirements.*—Every place used as a bakery shall be kept in a clean and sanitary condition as to its floors, side walls, ceilings, woodwork, fixtures, tools, machinery, pans, and utensils. All vehicles from which bread or any other bakeshop product is sold, shall be kept in a clean condition, and all baskets or other containers in which any of the said products are conveyed through the streets shall be closely covered in a way to exclude flies, dust, or other contamination. All parts of the bakeshop shall be adequately lighted by windows, and shall be properly ventilated. Mechanical means of ventilation shall be installed if the superintendent of health deems it necessary.

SEC. 17. *Flies; toilets.*—Every bakery shall be kept free from flies, and the doors, windows, and other openings shall be screened from April 1 to December 1 of each year.

No toilet shall be in direct connection with any bakeshop, and the toilet shall be ventilated to the outside. Every bakery shall be provided with adequate plumbing and drainage facilities.

SEC. 18. *Wearing apparel; disease.*—All workmen and employees while engaged in the manufacture or handling of bakery products in a bakery shall provide themselves with a suit of washable material which shall be used during the hours of work. No employee or other person shall spit on the floors or side walls of any bakery or place where foodstuffs are made or stored. No person who has tuberculosis, scrofula, or venereal disease, or any communicable disease, shall work in a bakery, and no owner, manager, or person in charge of any bakery shall knowingly require or permit such person to be employed in such bakeshop.

SEC. 19. *Inspection; alterations.*—The superintendent of health or any other employee of the health department shall have the right to enter any bakery at a reasonable hour to make an inspection, and if such inspection shall disclose a lack of conformity with the provisions of this ordinance the superintendent of health may require such changes, alterations, or renovations as may be necessary to make such bakery comply with the provisions of this ordinance.

SEC. 20. *Storage of materials.*—All rooms for the storage of flour or meal for use in connection with any bakery shall be dry, clean, and properly ventilated, and every bakery and room used for the storage of material and food products in connection therewith shall be so arranged that the shelves, cupboards, trays, troughs, bins, cases, and all other appliances for handling and storing the same can be easily removed and cleaned. All bakery products shall be stored in cases so as to exclude flies and dirt.

SEC. 21. *Penalty.*—Any person, firm, or corporation who shall violate or fail to comply with the provisions of this article shall be fined not less than \$5 nor more than \$100 for each offense, and a separate offense shall be regarded as committed each day on which such person, firm, or corporation shall continue such violation.

Restaurants—Sanitary Regulation—Employees—Inspection—Samples of Foodstuffs. (Ord. 270, Apr. 10, 1916.)

ART. 4, SEC. 22. *Permit and application.*—No person, firm, or corporation shall engage within the city of Decatur in the business of keeping a restaurant without first making written application for that purpose to the city clerk for a permit to conduct a restaurant business in the city of Decatur. Said application shall be accompanied by evidence that the applicant, each individual, all members of the firm if a copartnership, and the person or persons in charge of the business if a corporation is or are persons of good character and reputation and also that the premises where such restaurant is proposed to be kept are proper and suitable for that purpose from a hygienic and sanitary standpoint.

SEC. 23. *Prohibiting spitting; diseases.*—No restaurant keeper, employee, or other person shall spit on the floor or side walls of any restaurant where foodstuffs are made, stored, or handled. No person who has tuberculosis, scrofula, or venereal disease, or any communicable disease, shall work in any restaurant, and no owner, manager, or person in charge of any restaurant shall knowingly require or permit such a person to be employed in such restaurant.

SEC. 24. *Sanitary requirements.*—It shall be the duty of the keeper of every restaurant to at all times keep the premises wherein such restaurant is located clean and in a sanitary condition. All floors, utensils, receptacles, refrigerators, pantries, rooms, or any other place or thing whatsoever which is or are used for purpose of storage, preparation, cooking, or serving of food must at all times be kept clean and in a sanitary condition, and no decayed or unwholesome food of any kind whatsoever shall be kept, sold, or offered for sale or served in any such restaurant. Every such restaurant shall be provided with adequate light and proper ventilation.

SEC. 25. *Power of entry and samples, etc.*—It shall be the duty of the superintendent of the health department from time to time to inspect, or cause to be inspected, and examine all premises wherein restaurants are conducted for the purpose of ascertaining whether this ordinance, and all ordinances of the city, and the laws of the State of Illinois relative to the keeping of restaurants are being complied with, and it shall be his duty to cause all such ordinances and laws to be strictly enforced. It shall be the duty of the keeper of every restaurant to permit such inspection to be made, and when required to furnish samples of any kind of food kept, sold, or offered for sale in such restaurant, which samples shall be examined or analyzed under the direction of the superintendent of health, and a record of such examination or analysis shall be made and kept on file in his office.

SEC. 26. *Penalty.*—Any person, firm, or corporation violating any of the provisions of this article shall be subject to a fine of not less than \$5 nor more than \$100.

Buildings and Premises—Sanitary Regulation—Abatement of Insanitary Conditions—Nuisances—Offensive Trades. (Ord. 270, Apr. 10, 1916.)

ART. 2. SEC. 9. *Sanitation.*—The superintendent of health shall have and exercise general supervision of the sanitary condition of all schoolhouses and premises, hotels, lodging houses, theaters, public halls, or other places where public gatherings of any kind are held; restaurants, bakeries, livery stables, dairies, milk depots, meat markets, ice cream factories, or any other places in the city, and shall advise such improvements in the sanitary conditions as in his judgment are necessary, and as may be approved by the commissioner of public health and safety. Whenever it shall come to the notice of the superintendent of health that the condition of any building or premises is prejudicial to the health, or dangerous to the lives of the occupants, or the public, the superintendent shall make, or cause to be made, a thorough examination of the buildings or premises, and upon his report the commissioner of public health and safety shall cause such buildings or premises to be put in good sanitary condition at the cost of the individual responsible for or causing such insanitary or dangerous conditions, or have it condemned.

* * * * *

SEC. 12. *Premises offensive.*—Any store, house, factory, building, or other structure of any kind, or any ground or premises kept, permitted, or suffered to remain in such condition so as to be offensive to the inhabitants thereof, or any person, or dangerous or prejudicial to the public health, is hereby declared to be a nuisance, and any owner, occupant, or agent of such premises who shall neglect or refuse to abate such nuisance, after notice to do so by any members of the health department or any policeman, shall be subject to the penalties of this article.

SEC. 13. *Nuisances.*—No person shall throw, place, leave, cause or permit to be thrown, placed or left, any filth or rubbish in or upon any street, avenue, alley, or sidewalk of the city, in front of, or adjoining, any building or premises owned or occupied by him, or subject to his control, under the penalties of this article. No building, vehicle, structure, receptacle of anything used or to be used for any purpose whatever, shall be made, used, kept, maintained, or operated in the city of Decatur, if the using, keeping, maintaining, or operating of such vehicle, structure, receptacle, or thing shall be offensive, dangerous, or detrimental to the health of the community. In all cases where a nuisance shall be found in any building, or upon any ground, or premises within the jurisdiction of the city, a notice shall be served upon the owner, tenant, or lessee of such building or premises to remove such nuisance, and, in case of his neglect or refusal to do so in accordance with such notice, he shall be charged with the expense which may be incurred in the removal thereof by the city, to be collected by suit or otherwise, in addition to a fine or penalty for such violation.

Any factory, yard, building, or structure of any kind, or tallow shop, soap factory, tannery, distillery, livery stable, cattle shed or yard, packing house, slaughterhouse, or rendering establishment, or carpet cleaning establishment, or garbage disposal plant or dump, which shall become nauseous, foul, or offensive, is hereby declared a nuisance, and the person or persons owning, keeping, or maintaining, or in possession, charge, or control of any place aforesaid shall be subject to the penalties of this article. The keeping of any swine in any inclosure or pen within 300 feet of any dwelling house, public building, or factory within the city is hereby declared to be a nuisance. In all cases where no provision is herein made defining what are nuisances, and how the same may be removed, abated, or prevented, in addition to what may be declared such herein, those offenses known to the common law, or of the statutes of Illinois, as nuisances, may, in case the same exists within the city limits, or within one-half mile thereof, be treated as such and proceeded against as in this article provided.

SEC. 14. *Penalty.*—Whoever shall violate any of the provisions of this article shall be subject to a fine of not less than \$50, nor more than \$100 for each and every offense.

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ART. 11. SEC. 59. *Duty to disclose ownership.*—Every agent or other person having charge, control, or management, or who collects or receives the rents of any lands, premises, or other property in the city shall disclose the name or names of the owner or owners of such land, premises, or property, or the name or names of the person or persons for whom such agent or other person is acting upon application being made therefor by any inspector, agent, or officer of the department of health.

SEC. 60. *Use of premises.*—No person owning or in possession, charge, or control of any building or premises shall use the same or permit the use of the same or rent the same to be used for any business or employment or for any purpose of pleasure or recreation, if such use shall, from its boisterous nature, disturb or destroy the peace of the neighborhood in which such building or premises are situated or be dangerous or detrimental to health.

SEC. 61. *Insanitary building not to be leased nor occupied.*—No owner, agent, lessee, or person in possession, charge, or control of any building or any part thereof shall lease or let the same or any portion thereof or allow the same to be occupied by any person as a dwelling or lodging house, unless such building or such parts thereof are in a clean and wholesome condition as provided in this article.

SEC. 62. *Insanitary building; nuisance.*—Any building or part thereof which by reason of its physical or insanitary condition or of its being infected with disease is unfit for human habitation or which from any other cause is a source of sickness among the inhabitants of this city, or which otherwise endangers the public health, is hereby declared to constitute a public nuisance.

SEC. 63. *Examination; notice to abate; demolition.*—It is hereby made the duty of the city council to cause an examination to be made of any building alleged to be a public nuisance for any of the foregoing reasons, such examination to be made by a board of survey composed of the chief of the fire department and the city council. If the said board shall find and report that a public nuisance exists as defined in the foregoing section, the commissioner of health shall serve notice upon the owner of such building or his agent or the person in possession, charge, or control of such building, directing him to abate the nuisance, and to place the building in a condition that shall not endanger the public health within such reasonable time as the board of survey shall recommend. Upon the failure of the person so notified to obey said notice, the commissioner of health may after the expiration of the time specified therein abate the nuisance by ordering the vacation of such building or part or parts thereof when such vacation is required by the public health of this city, and if within 30 days after such vacation has been ordered the building or buildings are not put in a sanitary condition, then the commissioner of health shall have the power to order

the demolition of such building or buildings, and the chief of the fire department is hereby authorized and instructed to furnish the necessary service for such demolition on the request of the commissioner of health.

Privies, Cesspools, and Water-Closets—Construction and Maintenance—Connections with Sewer Required Where Possible. (Ord. 270, Apr. 10, 1916.)

ART. 9. SEC. 54. That it shall hereafter be unlawful for any person, persons, or corporation to construct, use, or maintain any privy, vault, water-closet, or cesspool within the city of Decatur where the property on which said privy, vault, closet, or cesspool is located shall be adjacent to any street or alley wherein said street or alley is located a sanitary main or lateral sewer and a water main or lateral connected with the city water system unless said privy, vault, closet, or cesspool is properly connected with said sewer and water system within the following named streets: Macon Street on the south, Monroe Street on the west; Wabash Railroad on the north, and the Illinois Central Railroad on the east. The installation of all plumbing work shall be done under the supervision and inspection of the city plumbing inspector, and the standard closet shall be the Joseph A. Vogel & Co. nonfreezing closet or any other closet equally as good.

SEC. 55. It shall be the duty of the superintendent of the department of public health and safety, or of any officer or agent appointed by him as a health officer to investigate all such cases described in section 54 hereof, and to notify all persons or corporations contemplating the construction of any such privy, vault, closet or cesspool contrary to the provisions of said section 54, not to construct the same; and where said privy, vault, closet or cesspool has been constructed, to notify said person, persons or corporation as the case may be, to abate the use of same and remove the same within one year from date of such notice, and where sewers are within said territory as described in section 54 hereof, and are accessible to the property wherein buildings are to be erected, no privy, vault, closet or cesspool shall be constructed therein.

SEC. 56. The construction, use, maintenance of any privy, vault, closet or cesspool contrary to the provisions of this article is hereby declared to be a common nuisance, and may be abated as such, and any person or corporation who violates any section of this article, or fails to comply with the orders of the superintendent of the department of public health and safety, or any of his officers or agents as aforesaid, shall be deemed guilty of a breach of this article, and upon conviction thereof, shall be subject to the penalties of this ordinance.

SEC. 57. *Penalty.*—Any person or corporation who violates or fails to comply with the provisions of this article shall be subject to a fine of not less than \$10, nor more than \$50, and upon a further failure of such person or corporation to comply with the provisions of this article after the first conviction, such person or corporation shall be subject to a fine upon conviction of not less than \$5 per day for each and every day said failure shall exist after said first conviction.

Stables and Disposal of Manure. (Ord. 270, Apr. 10, 1916.)

ART. 2. SEC. 11. *Stables and manure pits.*—Every owner, lessee, or user of any stable or place where horses or cattle are kept, or of any place in which manure or any liquid discharge of such animals shall collect, shall at all times keep, or cause to be kept, such stables or places and the drainage and appurtenances thereof in a cleanly condition, so that no offensive odors shall arise. Every owner, lessee or user of any building or premises wherein or whereon any horse or cow or any other beast of draft or burden, or any cattle may be kept within the city, shall provide, in connection with such building or premises, a suitable receptacle for dung, manure, filth or other offensive matter, which may from time to time be produced in the keeping of any such

animal in such building or upon such premises. Such receptacle shall be provided with a screen cover of suitable material as to exclude flies and shall be emptied at least once every week.

Births and Deaths—Registration of—Issuance of Burial Permits. (Ord. 270, Apr. 10, 1916.)

ART. 5. SEC. 27. *Duty of physicians.*—Every physician in attendance upon any person who shall die in the city of Decatur, shall, upon a form prescribed by the State board of health, file with the city clerk for the superintendent of health, within 24 hours after death, a death certificate stating the name, sex, residence, age, cause of death, length of duration of the disease or diseases causing the death, place of birth, date of death, social status, occupation, place of burial, and birthplace of father and mother. A permit authorizing the burial or removal of the body of the deceased shall be issued by the city clerk acting for the superintendent of health, upon the receipt of the usual certificate of death properly filled out, signed by the attending physician, or if the death be the subject of an inquest, by the coroner or other officer holding such inquest.

SEC. 28. *Burial records.*—The city clerk acting for the superintendent of health shall enter in a suitable book to be kept for that purpose, a record of all burial permits issued, specifying date of issue and to whom issued, together with all the items of information upon the certificates on which the issue of such permit is based.

* * * * *

SEC. 32. *Births and stillbirths.*—It shall be the duty of every physician or midwife attending at the birth of a child, and when no physician or midwife is in attendance, the parents or custodian of the child born, to make a certificate of such birth, and cause the same to be filed within 10 days with the city clerk for the health department. Said certificate shall be attested by the physician or midwife, if any in attendance, and, no physician or midwife being in attendance, by the parent or custodian of the child, and said certificate shall be made upon the form prescribed by the State board of health. That a stillborn child shall be registered as a stillbirth and a certificate of stillbirth shall be filed with the local registrar in the same manner as required for a certificate of death: *Provided*, That a certificate of stillbirth shall not be required for a child that has not advanced to the fifth month of uterogestation. The medical certificate of the cause of death shall be signed by the attending physician or midwife, if either was in attendance, and shall state the cause of death as "stillborn," with the cause of the stillbirth, if known, whether a premature birth, and if prematurely born, the period of uterogestation in months, if known; and burial or removal permit of the form prescribed by the State board of health shall be required. Stillbirths occurring without attendance of either physician or midwife, shall be treated as death without medical attendance.

SEC. 33. *Birth records.*—The city clerk acting for the superintendent of health shall enter, upon a suitable record to be kept for that purpose, a record of every birth reported to him, together with all the items of information in the certificate, and shall when he has recorded such items of information, file the birth certificate with the State board of health and a copy to the county clerk of Macon County.

SEC. 34. *Penalty.*—Whoever shall fail to comply with the provisions of this article shall, upon conviction, be subject to a fine of not less than \$5 nor more than \$100 for each and every offense.

Burial—Communicable Diseases. (Ord. 270, Apr. 10, 1916.)

ART. 5, SEC. 29. *Burials and removals.*—No burial, interment, or cremation shall be lawful in the city of Decatur, nor shall any dead body be removed from the city until a permit for such burial, interment, cremation or removal, shall have first been obtained from the superintendent of health. No burial or exhumation of any body

shall be permitted in the night time unless for good reasons, to be entered in full upon the records of the office of the superintendent of health. It shall be unlawful for any person to bury any body of a human being except in an established cemetery. The custodian or sexton of every cemetery in which bodies are buried shall be held liable for interment in such cemetery, if such burial is made without a permit from the superintendent of health authorizing such burial. The transportation or removal of bodies who have died of smallpox, cholera, yellow fever, diphtheria, scarlet fever, or other contagious or infectious diseases, is forbidden within the limits of the city of Decatur, except in conformity with the rules and regulations of the State board of health.

SEC. 30. Duty of undertakers.—Any undertaker having in his care or possession, or who is preparing for burial the body of any person who has died of smallpox, scarlet fever, diphtheria, measles, or other contagious diseases, shall give immediate notice to the health department of the same. It shall be the duty of the undertaker to care for the body of a person who has died of any of the above specified diseases in the following manner: At the time of his first visit to the house occupied by the deceased, and without delay, he shall cause the same to be thoroughly washed and properly disinfected; the nasal cavities and all other openings shall be properly stopped.

SEC. 31. Funerals.—The funeral of any person dying of the above-named diseases shall be private, and no person except the undertaker or his assistant, the clergyman, and the immediate members of the household may attend. No person shall enter the room or tenement containing the body of a person who has died of the diseases above mentioned except the persons specified above, and any employee of the health department, until the premises have been thoroughly disinfected and quarantine removed. Burial shall be within 24 hours after death. The undertaker shall notify the health department when a carriage is used in such cases as mentioned above, and it shall not be used again until it has been thoroughly fumigated under the direction of the health department.

Department of Health—Organization, Powers, and Duties. (Ord. 270, Apr. 10, 1916.)

ARTICLE 1, SECTION 1. Health department established.—There is hereby established an executive department of the municipal government of the city of Decatur, Ill., which shall be known as the health department, and shall embrace the commissioner of public health and safety, the superintendent of health, food and sanitary inspector, and such other officers as the council shall from time to time by ordinance or otherwise provide.

SEC. 2. The commissioner of public health and safety shall have full management and control of the health department, and all regulations and orders thereto, to be presented through him. All subordinate officers of said department shall be subject to such rules and regulations as shall from time to time be prescribed by said commissioner.

SEC. 3. Superintendent of health.—There is hereby established the office of superintendent of health. The superintendent of health shall be the executive officer of said department, and, in subordination to the commissioner of health and safety, shall have the supervision and management of all matters pertaining thereto. He shall hold his office for the term of one year or until his successor shall be appointed and qualified. Said superintendent may be a physician duly licensed to practice medicine, or a person specially trained for this work, and having knowledge of public health and administration, and before entering his duties shall execute a bond to the city of Decatur for the sum of \$2,000 with the securities to be approved by the commissioner, conditioned for the faithful performance of his duty. The superintendent of health shall have the general supervision over the health of the inhab-

itants of Decatur, shall take such steps and employ such measures as are necessary to secure and maintain the sanitary and hygienic salubrity of the city. He shall have full charge of the prevention, restriction, and suppression of epidemics of contagious and infectious diseases. For the purpose of carrying out the provisions of this ordinance the commissioner of public health and safety, the superintendent of health, and other officers of the department shall be permitted to enter, at any reasonable hour, any premises, house, store, stable, manufacturing plant, or any other building, and shall have the authority to arrest, or cause to be arrested, any person who shall violate any of the provisions of this ordinance.

SEC. 4. *Jurisdiction.*—The jurisdiction of the health department shall extend over the corporate limits of the city of Decatur and to a point one-half mile beyond the limits of said city, and all rules and regulations and ordinances relating to sanitation and public health shall apply and be in force over such territory.

SEC. 5. *Expenditures.*—The commissioner of health shall not contract any financial obligations or expend any money beyond the amount appropriated for the work of the health department. Should any emergencies arise, the commissioner of public health and safety shall immediately call upon the city council to consider his request for an emergency appropriation.

SEC. 6. *Reports.*—Said superintendent of health shall from time to time recommend to the commissioner of public health and safety, for submission to the commission, such measures as he may deem necessary to secure the hygienic and sanitary welfare of the city, and said superintendent of health shall monthly render to the commissioner of public health and safety a full and accurate statement of all expenditures incurred in the discharge of his duties, together with a general statement of the operation of the department for the preceding month, and shall annually render a full report of the work of the department to the commissioner of public health and safety.

SEC. 7. *Health inspectors.*—All health inspectors of the department shall give bond to the city in like manner and amount as a police patrolman. It shall be the duty of the inspectors to carry out the orders of the superintendent of health in relation to sanitary conditions of the city. They shall, when complaint is made, make a thorough investigation of same, and cause all nuisances to be removed and abated within a reasonable time.

SEC. 8. *Powers.*—Said inspectors shall be authorized and allowed, at any reasonable hour, to enter any store, meat market, hotel, boarding house, saloon, factory, bakery, or any other place within the city, to examine the cellars, vaults, sinks, sewers, or drains belonging thereto, also to enter all lots and premises, and to cause all stagnant pools of water to be drained off, and all dirt piles, garbage, or any other offensive material to be removed.

Motion-Picture Theaters—Cleaning and Disinfection. (Ord. 270, Apr. 10, 1916.)

ART. 10. SEC. 58. *Fumigation, disinfection, ventilation.*—It shall be the duty of the owner, lessee, or manager of every motion-picture theater in the city to thoroughly clean and disinfect the same at least once every seven days. The disinfecting or fumigation of every such theater shall be done under the direction or supervision of the health department. The cost of such disinfection or fumigation shall be charged to the owner of such theater. Every moving-picture theater shall be efficiently ventilated either by natural means or mechanically.

EL PASO, TEX.

Meat—Sale of. (Ord. May 25, 1916.)

SECTION 1. That it shall be unlawful for any person, firm, or corporation to sell or offer for sale any meat within the city limits of the city of El Paso, Tex., which meats have not been previously inspected and passed either by a United States Government inspector of meats or the inspector of meats employed by the city of El

Paso, Tex., and any one so doing shall be guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not to exceed \$100.

Rags and Bones—Accumulation or Storage of, Prohibited. (Ord. May 25, 1916.)

SECTION 1. It shall be unlawful for any person, firm, or corporation to permit the accumulation or storing of rags or bones upon their property within the city limits of the city of El Paso, Tex., and any one having rags or bones now in storage on their property shall cause the same to be removed within 30 days from the passage of this ordinance, and any person, firm, or corporation violating the terms hereof shall be deemed guilty of a misdemeanor, and upon a conviction thereof shall be fined in any sum not to exceed \$100.

MOUNT VERNON, N. Y.

Foodstuffs—Persons Having Communicable Diseases Must Not Handle Foodstuffs for Sale—Physical Examination. (Res. Bd. of H., Jan. 10, 1916.)

Resolved, That article 11 of the sanitary code of the city of Mount Vernon is hereby amended by adding thereto a new section to be known as section 80a:

Employment of persons affected with infectious or venereal disease prohibited.—No person who is affected with any infectious disease or with any venereal disease in a communicable form shall work or be permitted to work in any place where food or drink is prepared, cooked, mixed, baked, exposed, bottled, packed, handled, stored, manufactured, offered for sale, or sold.

Whenever required by the board of health, any person employed in any such place shall submit to a physical examination by a medical inspector of said board of health. No person who refuses to submit to such examination shall work or be permitted to work in any such place.

NEW BEDFORD, MASS.

Milk—Sale of—Straining, Cooling, and Bottling. (Reg. Bd. of H., Apr. 20, 1916.)

Rules 6 and 7 of the rules and regulations governing the production, care, and sale of milk in New Bedford have been substituted as follows:

RULE 6. All milk produced for the purpose of sale or distribution in the city of New Bedford shall be strained and cooled as soon as it is drawn from the cow, outside of the barn, and in a clean atmosphere, and away from all sources of contamination, and such milk delivered to families, grocery stores, markets, and shops must be delivered in properly stoppered bottles.

RULE 7. Milk for sale in any store, shop, restaurant, market, bakery, or other establishment shall be stored in a refrigerator. No vessel containing milk for sale shall be allowed to stand outside said refrigerator.

Tenement Houses—Air Space—Water-Closets. (Reg. Bd. of H., Feb. 28, 1916.)

A tenement house as defined by section 2, part 1, chapter 786, acts of 1913, is any house or building, or part thereof, which is rented, leased, let, or hired out, to be occupied, or is occupied, or is intended, arranged, or designed to be occupied as the home or residence of two or more families, which families may consist of one or more persons, living independently of each other and doing their cooking on the premises, and having a common right in the halls, stairways, yard, courts, cellar, sinks, and water-closets, or any of them.

RULE 1. Every room in a tenement house as defined in section 1, special act 234, 1915, shall contain not less than 400 cubic feet of air to each adult, and 300 cubic feet of air to each child under 12 years of age occupying the room.

RULE 2. In tenement houses hereafter erected, no water-closet shall be installed in any pantry, and in tenement houses which already exist, wherein such water-closets are located, the board of health may order the same abandoned and relocated, or inclosed in a manner satisfactory to the board of health.

NEW YORK, N. Y.

Disinfection—Permit Required When Cyanide is Used. (Reg. Dept. of H., Apr. 25, 1916.)

Resolved, That the following additional section of the Sanitary Code, to be known as section 104, be, and the same is hereby, adopted:

SEC. 104. *Cyanide used for fumigating purposes regulated.*—No person shall use, or cause to be used, any hydrocyanic acid, cyanogen, or cyanide gas for the purpose of fumigating any building, vessel, or other inclosed space in the city of New York without a permit issued therefor by the board of health, or otherwise than in accordance with the terms of said permit, or the regulations of said board.

Schools, Private—Maintenance of. (Reg. Dept. of H., Apr. 25, 1916.)

The following regulations relate to section 222 of the Sanitary Code, which was published in the Public Health Reports May 26, 1916, page 1346:

REGULATION 1. *Certificates from fire department and bureau of buildings required.*—The applicant shall procure from the fire department of the city of New York and the bureau of buildings of the borough of said city in which the school is located, respectively, a certificate to the effect that the premises for which a permit is desired complies with all fire and building laws, ordinances, and regulations applicable to schools. Such certificates shall be filed with the department of health at the time the application is made for a permit.

REG. 2. *Lighting.*—All classrooms shall be adequately lighted by direct natural means at all points, or where natural lighting is impracticable, because of the hours of attendance, adequate artificial light shall be provided.

REG. 3. *Ventilation.*—Adequate means of ventilation by natural or mechanical means shall be provided at all times. (As amended by board of health, May 31, 1916.)

REG. 4. *Desks and seats.*—All seats used by pupils in classrooms shall be provided with backs, and all desks shall be adjusted so as to avoid any unhygienic attitudes on the part of scholars.

REG. 5. *Number of children permitted in classrooms regulated.*—Where a classroom is provided with natural means of ventilation, 200 cubic feet of air space shall be provided for each child under 10 years of age; 400 cubic feet of air space shall be provided for each child between 10 and 14 years of age, and 800 cubic feet of air space shall be provided for each child between 14 and 16 years of age. (As amended by board of health, May 31, 1916.)

REG. 6. *Period of attendance.*—The period of attendance at day schools shall be between the hours of 7 a. m. and 7 p. m. The length of time children shall attend during the said period shall be regulated as follows:

The attendance of children under the age of 10 years in classrooms shall be limited to four hours.

The attendance of children between the ages of 10 and 14 years in classrooms shall be limited to six hours.

The attendance of children between the ages of 14 and 16 years in classrooms shall be limited to eight hours. (As amended by board of health, May 31, 1916.)

REG. 7. *Toilet facilities.*—There shall be provided suitable and convenient water-closets to the number of one for every 20 scholars registered, with adequate facilities for hand washing adjacent thereto. There shall be separate water-closet compartments

or toilets for females, to be used exclusively by them. Urinals to the number of one for every 20 scholars registered shall be installed in the water-closet compartments for male children. (As amended by board of health, May 31, 1916.)

REG. 8. *Minimum age of attendance.*—The minimum age at which a child shall be permitted to attend school shall be 4 years.

REG. 9. *Sanitary conditions.*—The premises shall be kept in a clean and sanitary condition at all times, and no rooms used for classes shall be used for sleeping or living purposes.

REG. 10. *Room for children's outer clothing to be provided.*—A room or closet adequately ventilated and lighted shall be provided apart from the classroom for the care of the scholars' outer clothing.

REG. 11. *Drinking water to be provided.*—An adequate supply of drinking water shall be provided by sanitary means. (As adopted by board of health, May 31, 1916.)

Hospitals—Permits for Establishment and Maintenance. (Reg. Dept. of H., Mar. 14, 1916.)

REG. 15. *Permits.*—Permits issued by the board of health under and by virtue of the provisions of section 220¹ of the Sanitary Code and the regulations relating thereto shall remain in full force and effect until revoked by said board.

Horses—Slaughtering of, for Human Food. (Reg. Dept. of H., June 28, 1916.)

Resolved, That the following regulations governing the slaughtering of horses, and relating to section 327 of the Sanitary Code, be, and the same are hereby, adopted:

REGULATION 1. *Regulations to be complied with.*—The business of slaughtering horses for human food shall be conducted, maintained, and operated in accordance with the regulations governing the slaughtering of cattle, sheep, swine, pigs, and calves, which said regulations are made part hereof.

REG. 2. *Ante-mortem examination and inspection required.*—No horse intended for human food shall be slaughtered in the city of New York until a duly authorized representative of the department of health shall have examined the horse offered for slaughter and found it free from glanders.

REG. 3. *Buildings and premises to be used exclusively for the slaughtering of horses.*—Buildings and premises used for the slaughtering of horses intended for human food shall be used exclusively for such purpose.

REG. 4. *Personal supervision by representative of the department of health required.*—No horse intended for human food shall be slaughtered except under the immediate personal supervision of a duly authorized representative of the department of health.

REG. 5. *Post-mortem examination and inspection.*—A careful post-mortem examination and inspection shall be made by the representative of the department of health of the carcasses and parts thereof, at the time of slaughter, of all horses slaughtered in the city of New York.

REG. 6. *Head, tongue, tail, blood, and all viscera to be kept separate.*—The head, tongue, tail, blood, viscera, and all other parts of the carcass intended to be used in the preparation of food products shall be held separate and apart and in such manner as to preserve their identity until the post-mortem examination shall have been completed, in order that they may be identified in case the carcass is found to be contaminated.

REG. 7. *Retention of carcasses.*—Each carcass, including all parts and detached organs thereof, in which any lesion of disease or other condition is found which might render the meat or any such organ unfit for food purposes, shall be retained by the representative of the department of health at the time of post-mortem examination and inspection and thereafter removed, under his supervision, to the place designated

¹ Public Health Reports, Aug. 6, 1915, p. 2327.

for final inspection. The identity of every such retained carcass, part, and detached organ thereof shall be maintained until the final inspection shall have been completed. No person shall wash, cut, or trim such retained carcass, or remove or cause to be removed any portion or part thereof, or do or commit any act which would remove evidence of disease or contamination therefrom until the same shall have been finally stamped and passed by the representative of the department of health.

REG. 8. *Contamination of diseased carcasses.*—Carcasses of horses affected with or showing lesions of any of the following-named diseases or conditions shall be condemned, destroyed, and removed in the manner and under the conditions prescribed in regulation 9:

Acute diffuse metritis.	Horse pox.
Acute inflammation of lungs.	Icterus.
Acute inflammation of meninges.	Melanosis.
Acute inflammation of pericardium.	Pleuropneumonia.
Acute inflammation of peritoneum.	Purpura hemorrhagica.
Acute inflammation of pleura.	Pyemia.
Anthrax.	Rabies.
Azoturia.	Septicemia.
Cerebrospinal meningitis.	Strangles.
Glanders.	Tetanus.
Hemorrhagic enteritis.	Tuberculosis.
Hemorrhagic gastritis.	

REG. 9. *Condemnation, destruction, and removal of carcasses unfit for human food.*—Each carcass, or part thereof, which is found on post-mortem examination and inspection to be affected with any of the diseases or conditions set forth in regulation 8 hereof or which is unsound, unwholesome, or otherwise unfit for human food shall be condemned, destroyed, denatured, and removed to the offal dock. The killing bed upon which the animal shall have been slaughtered shall be thoroughly disinfected before being again used.

REG. 10. *Skins and hides of condemned horses to be disinfected.*—The skins and hides of all horses affected with any communicable disease shall not be removed from the establishment unless the same shall have been disinfected in the following manner:

Each skin or hide shall be immersed in a 5 per cent solution of liquor cresolis compositus, or a 5 per cent solution of carbolic acid, for a period of not less than five minutes, except as hereinafter provided in regulation 11.

REG. 11. *Carcasses affected with anthrax to be destroyed.*—All parts, including hides, hoofs, viscera, intestinal contents, fat, and blood of a horse, the carcass of which shows lesions of anthrax, regardless of the extent of the disease, shall be condemned and immediately incinerated or otherwise completely destroyed under the direct supervision and control of the representative of the department of health.

Horseflesh—Sale of—Labeling of Containers. (Reg. Dept. of H., June 28, 1916.)

Resolved, That the following regulations governing the sale of horseflesh, and relating to section 327 of the Sanitary Code, be and the same are hereby adopted:

REGULATION 1. *Preparation and sale restricted.*—No other meat or meat product shall be prepared, held, kept, offered for sale or sold in any establishment where horseflesh is prepared, held, kept, offered for sale, or sold.

REG. 2. *Sign to be displayed.*—A sign bearing the words "horseflesh sold here," printed in black letters not less than 3 inches in height and 1½ inches in width, shall be conspicuously displayed in each show window and salesroom of each establishment where horseflesh is prepared, kept, held, offered for sale, or sold.

REG. 3. *Containers to be marked or stamped.*—The words "composed wholly (or in part) of horseflesh" shall be plainly, clearly, legibly, and conspicuously set forth in

English on each of the casings, cans, packages, or other containers in which food products composed wholly or in part of horseflesh are held, kept, offered for sale, or sold.

REG. 4. Sale regulated.—No carcass, or part of a carcass of a horse intended for human food shall be offered for sale, sold, or given away in the city of New York until they shall, respectively, have been inspected and passed as fit for human food by a duly authorized inspector of the department of health of the city of New York; or in case of parts of the carcass unless such part shall have been cut from the carcass which had previously been inspected and passed as hereinbefore provided.

Bathing Establishments—Permit Required. (Reg. Dept. of H., June 28, 1916.)

Resolved, That section 340 of the Sanitary Code be and the same is hereby amended and made to read as follows:

SEC. 340. Bathing establishments regulated.—Bathing suits shall not be hired out, nor shall any bathing establishment be maintained, in the city of New York, without a permit therefor issued by the board of health or otherwise than in accordance with the terms of said permit and the regulations of said board.

For the purpose of this section the expression "bathing establishment" shall be taken to mean and include every building, room, inclosure, place, or premise wherein bathing suits are hired out, or which, for hire, is used for the purpose of dressing or undressing in connection with the wearing, putting on, or taking off of bathing suits.

Railroad Cars and Stations, Ferryboats, and Ferryhouses—Cleaning of. (Reg. Dept. of H., June 28, 1916.)

Resolved, That section 301 of the Sanitary Code be and the same is hereby amended and made to read as follows:

SEC. 301. Public vehicles and other public places to be cleaned daily.—Every railroad car, omnibus, and ferryboat used in the city of New York for carrying passengers, and every railroad depot, railroad station, railroad platform, and ferryhouse, and every public room or space connected therewith, and every stairway and other means of entrance thereto or exit therefrom, shall, on each and every day on which it shall be used, be carefully and thoroughly cleaned so that all refuse, dirt, and filth are removed therefrom.

WATERTOWN, N. Y.

Poliomyelitis—Children under 15 Years of Age from Infected Localities—Arrival to be Reported to Health Officer. (Reg. Bd. of H., July 17, 1916.)

Pursuant to the authority vested in it by sections 21¹ and 25, article 3, of the public health law, the board of health of the city of Watertown, N. Y., hereby orders that the heads of households and proprietors or managers of establishments, wherein are lodged children under 15 years of age who have arrived in this city from any section of Greater New York or other cities or districts affected by epidemic infantile paralysis, or children of said age who have within two weeks of their arrival in Watertown been in any of said affected cities or districts, shall forthwith report their arrival to the health officer * * *.

Any violation of this order shall be punishable by a fine of not exceeding \$25.

¹ Reprint No. 264 from the Public Health Reports, p. 318.